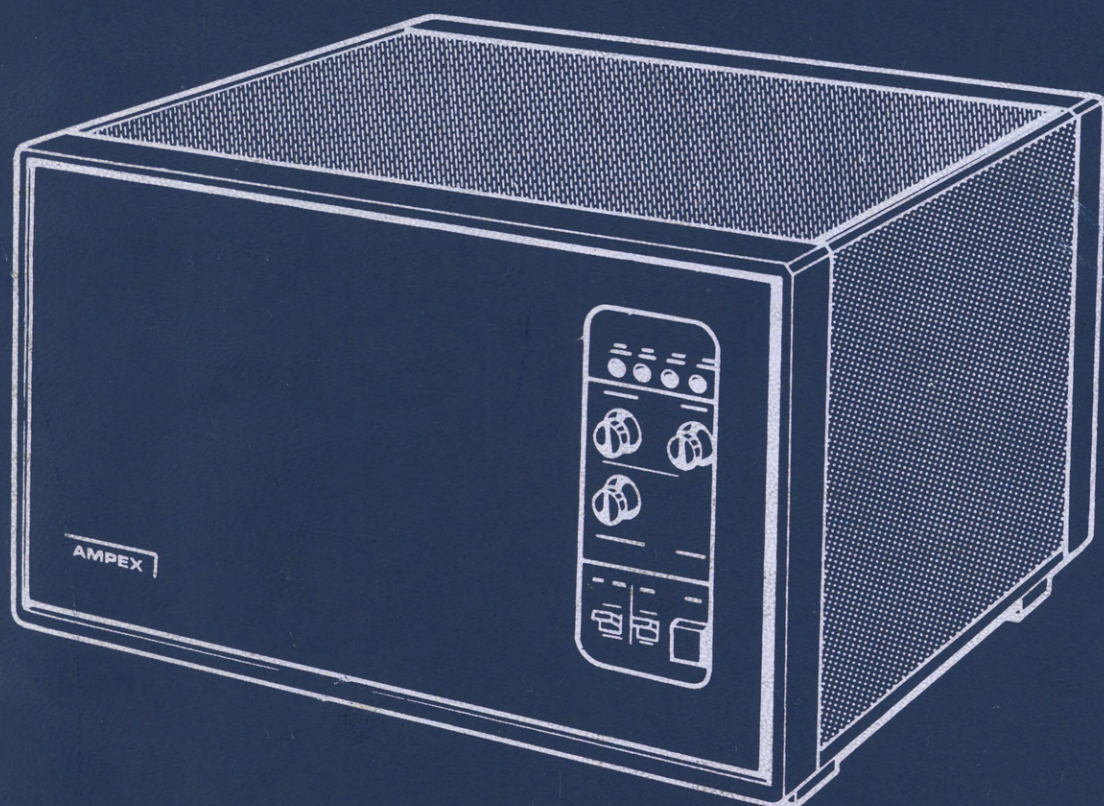


TBC-2B

DIGITAL
TIME-BASE
CORRECTOR



NTSC
PARTS LISTS AND SCHEMATICS

1809485

AMPEX

Catalog No. 1809485-10
Reissued: August 1982

TBC-2B
DIGITAL TIME-BASE CORRECTOR
NTSC

PARTS LISTS AND SCHEMATICS

AMPEX CORPORATION
AUDIO-VIDEO SYSTEMS DIVISION

Prepared by
AVSD Technical Publications
Ampex Corporation
401 Broadway
Redwood City, CA 94063

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Catalog No. 1809485-10
Reissued: August 1982

FOR ADDITIONAL TECHNICAL INFORMATION

FIELD ENGINEERING BULLETIN SERVICE

AMPEX		REF. NO.	60271
FIELD ENGINEERING BULLETIN		SHEET NO.	~7503-23.1
TITLE: ACR-25 SPARE PARTS INFORMATION R015517		MODEL NO.	ACR-25
		DATE OF ISSUE	3/75
		DISTRIBUTION	

I. APPLICABILITY
All ACR-25 Cassette Recorders. This FEB replaces FEB 50296.

II. PURPOSE
A listing of the following items used in the ACR-25 for spare parts inventory and parts ordering information: diodes, transistors, integrated circuits, relays, lamps and switches.

III. DISCUSSION
Parts are listed, as much as possible, in numerical order by Ampex part number. Parts for all accessories, except IDA (Identification Data Accessory) and ADA (Automatic Data Accessory) are included in this listing. The total quantity of each item in the ACR-25 is given. This list is for information only.

NOTES:

1. Some items are not used in all ACR-25's. Refer to the notes on the last page of this FEB.
2. A spare parts kit for the ACR-25 is available from Ampex. The part number is 1385264-04.

THE AMPEX AUDIO-VIDEO SYSTEMS DIVISION'S TECHNICAL SUPPORT GROUP PUBLISHES FIELD ENGINEERING BULLETINS (FEBs) DESCRIBING APPROVED EQUIPMENT MODIFICATIONS, SPECIAL TOOLS AND ACCESSORIES PLUS INFORMATION ON IMPROVED OPERATING AND MAINTENANCE TECHNIQUES.

TO RECEIVE THESE BULLETINS, SEND US THE FOLLOWING INFORMATION:

Owner's Name	Owner's Address	Model No.
Serial No.	Dealer's Name	Dealer's Address
	Date of Purchase	

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AUDIO-VIDEO SYSTEMS DIVISION
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Effective: 1 April 1979

SAFETY AND FIRST AID SUGGESTIONS

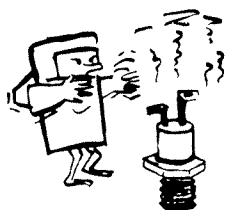
Regardless of how well electrical equipment is designed, personnel can be exposed to **dangerous electrical shock** when protective covers are removed for maintenance or other activities. Therefore, it is incumbent on the user to see that all safety regulations are consistently observed and that each individual assigned to the equipment has a clear understanding of first aid related to electrical hazards.

In addition, the following safety practices must be followed:



- 1 Do not attempt to adjust unprotected circuit controls or to dress leads with power **on**.

- 2 Do not touch heavily loaded or overheated components without precaution to avoid burns.



- 3 Do not assume that all danger of electrical shock is removed when power is **off**. Charged capacitors can retain dangerous voltages for a long time after power is removed. These capacitors should be discharged through a suitable resistor before any circuit points are touched.

- 4 Always avoid placing parts of the body in series between ground and circuit points.



- 5 Remember that some semiconductor cases and solid-state circuits carry high voltages.



- 6 Don't take chances. Be fully trained. Ampex equipment should be operated and maintained only by fully qualified personnel.

If someone seems unable to free himself while receiving an electrical shock, **turn power off** before attempting to render aid. A muscular spasm or unconsciousness can make a victim unable to free himself from the electrical power.

WARNING

DO NOT
TOUCH VICTIM OR HIS CLOTHING BEFORE
POWER IS REMOVED OR YOU MAY ALSO
BECOME A SHOCK VICTIM

If power cannot be removed immediately, **very carefully** loop a length of dry nonconducting material (such as rope, insulating material, or clothing) around the victim and pull him free of the power. Carefully avoid touching him or his clothing until free of power. Immediately start the appropriate first aid procedures.

GOOD PRACTICES

In maintaining the equipment covered in this manual, please keep in mind the following standard good practices:

1. When connecting any instrument (oscilloscope, waveform monitor, etc.) to a high-frequency output, use the appropriate termination resistor at the input of the instrument, unless the instrument is terminated internally.
2. When inserting or removing printed wiring assemblies (PWAs), cable connectors, or fuses, always turn off power to the affected portion of the equipment. After power is removed, allow sufficient time for the power supplies to bleed down before reinserting PWAs.
3. When troubleshooting, remember that FETs and other metal-oxide-semiconductor (MOS) devices may appear defective because of leakage between traces or component leads on the printed wiring board. Clean the printed wiring board and recheck the MOS device before assuming it is defective.
4. When replacing MOS devices, follow standard practices to avoid damage caused by static charges and soldering.
5. When removing components from PWAs (particularly ICs), use care to avoid damaging PWA traces.

WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. As temporarily permitted by regulation it has not been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

INTRODUCTION

This manual contains parts lists and schematics for the TBC-2B, Digital Time Base Corrector, NTSC, Ampex Assembly Number 1409000.

Four indexes list the assemblies and schematics as follows:

- **Indentured List of Assemblies** — List of assemblies in sequence of appearance in the manual.
- **Numerical List of Assemblies** — List of assemblies in numeric sequence.
- **Numerical List of Schematics** — List of schematics in numeric sequence.
- **List of Schematics by PWA Number** — List of schematics in PWA number sequence.

RELATED DOCUMENTS

CATALOG NO.	TITLE
1809474	Description and Maintenance
1809503	Installation and Operation

INDENTURED LIST OF ASSEMBLIES

TITLE	ASSEMBLY NO.	PAGE NO.
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NTSC Kit	1409133	1-3
Basic Assembly	1409001	1-4
2 CARD RACK		
Card Rack Assembly	1409002	2-1
Power Supply Assembly	1409155	2-3
Power Supply Regulator PWA	1409156	2-7
Heat Radiator Assembly	1409158	2-10
Motherboard and Connector Panel Assembly	1409097	2-11
Motherboard Harness Assembly	1409100	2-15
3 PRINTED WIRING ASSEMBLIES		
Color Processor PWA, A2,	1405143	3-1
Video Input PWA, A3	1405134	3-11
VPR-20/TBC-2B Interface PWA	1460204	3-23
A/D Converter PWA, A4	1409108	3-29
Tape H Comparator PWA, A5	1409104	3-35
Tape VCO PWA, A6	1409101	3-45
Memory Control PWA, A7	1409094	3-55
Serial/Parallel Converter PWA, A8	1409122	3-65
Serial/Parallel Converter w/One Line D.O.C., A8	1409140	3-69
Memory PWA, A9, A10, A11	1409107	3-83
Parallel/Serial Converter PWA, A13	1402396	3-89
Parallel/Serial Converter PWA w/Velocity Compensator, A13	1409125	3-93
Video Output PWA, A14	1405189	3-103
Sync Generator PWA, A15	1405186	3-117
Video Processor PWA, A16,	1405146	3-131
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Door Assembly	1405116	4-3

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Control Panel PWA	1409110	4-7
Standalone Rack Mount Kit.	1409136	4-10
Door Assembly (See page 4-3).	1405116	
Control Panel Assembly (See page 4-4).	1409129	
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Control Panel Assembly	1405109	4-12
TBC Remote Panel Assembly,	1409131	4-15
Control Panel PWA (See page 4-7).	1409110	
TBC-2B Upgrade Kits	1460105	4-19
A/D Clock Driver Kit	1461800	4-20
Multiburst Trap Kit	1461807	4-21
Slow Motion After Shuttle Edit Ready Initiate Kit (Ref. 1409094)	1460249	4-25
VPR-20/TBC-2B Interface Kit (Ref. 1405134)	1460189	4-26
VPR-20/TBC-2B Interface kPWA (See page 3-23)	1460204	
5 MISCELLANEOUS		
Miscellaneous Part Kit.	1409153	5-1
Extender Board Assembly	1402453	5-2
VPR-20/TBC-2B Interface Adapter Cable Assembly w/Schematic.	1407417	5-4
APPENDIX A		
Integrated Circuits		A-i

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1405109	C	Control Panel Assembly	4-12
1405116	C	Door Assembly	4-3
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1405143	P	Color Processor PWA, A2	3-1
1405146	P	Video Processor PWA, A16	3-131
1405186	R	Sync Generator PWA, A15	3-117
1405189	V	Video Output PWA, A14	3-103
1407417	D	VPR-20/TBC-2B Interface Adaptor Cable Assembly w/Schematic	5-4
1409000	AJ	Time Base Corrector, TBC-2B, NTSC	1-1
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1409002	H	Card Rack Assembly	2-1
1409094	V	Memory Control PWA, A7	3-55
1409097	K	Motherboard and Connector Panel Assembly	2-11
1409100	C	Motherboard Harness Assembly	2-15
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1409104	V	Tape H Comparator PWA, A5	3-35
1409107	K	Memory PWA, A9, A10, A11	3-83
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1409125	P	Parallel/Serial Converter PWA, w/velocity Compensation, A13	3-93
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1409130	B	Console Mount Kit	4-11
1409131	B	TBC Remote Panel Assembly	4-15
1409133	AE	NTSC Kit	1-3
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1409136	D	Standalone Rack Mount Kit	4-10
1409140	P	Serial/Parallel Converter PWA, w/One Line D.O.C., A8	3-69
1409153	G	Miscellaneous Parts Kit	5-1
1409155	R	Power Supply Assembly	2-3
1409156	K	Power Supply Regulator PWA	2-7
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1460105	D	TBC-2B Upgrade Kits List	4-19
1460189	G	VPR-20/TBC-2B Interface Kit	4-26
1460204	D	VPR-20/TBC-2B Interface PWA	3-23

NUMERICAL LIST OF ASSEMBLIES (Continued)

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2	Color Processor PWA	1406117	3-9
3	Video Input PWA	1405136	3-19
4	A/D Converter PWA.	1409149	3-32
5	Tape H Comparator PWA	1409106	3-41
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TBC-2B Digital Time-Base Corrector (NTSC)

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER											
				-01											
1	1409001-04	BASIC ASSEMBLY, TBC-2B, 525/625		1											
2															
3	1409135-02	STAND ALONE CABINET KIT	INSTALLATION OPTIONS 1	1											
4	1409136-01	STAND ALONE RACK MOUNT KIT		1											
5	1409130-01	CONSOLE MOUNT KIT, TBC-2B/VPR		1											
6															
7	1409133-01	NTSC KIT	1	1											
8															
9															
10															
11	1409122-01	PWA, S/P CONVERTER	1	1											
12	1409123-02	PWA, S/P CONVERTER-DOC., NTSC		-											
13	1409140-06	PWA, S/P CONVERTER-ONE LINE DOC, NTSC		1											
14															
15															
16															
17															
18	1402396-02	PWA, P/S CONVERTER	1	1											
19															
20	1409125-08	PWA, P/S CONVERTER-VEL.COMP, 525/625		1											
21															
22	1405143-08	PWA, COLOR PROCESSOR, NTSC	2	1											
23	1405146-05	PWA, VIDEO PROC, NTSC	2	1											
24															
25															
26															
27															
28															
29															
30															
31															
32															
33															
34															
35															
36															

REV. AE

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BASIC ASSEMBLY
NEXT HIGHER ASSEMBLY 1409000

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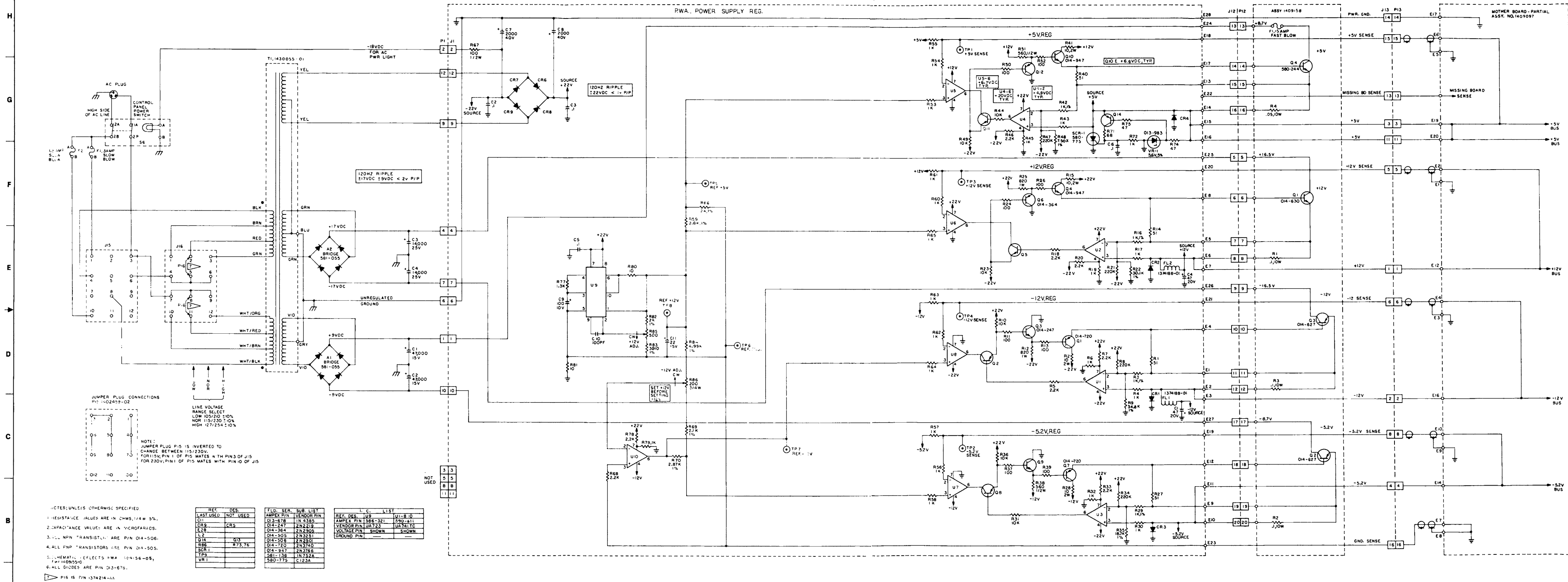
1409002-03

CARD RACK ASSEMBLY
NEXT HIGHER ASSEMBLY 1409001

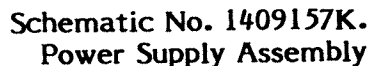
REV. H

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01	-02	-03							
1	1409155-01	POWER SUPPLY ASSEMBLY		1	1	-							
2	1409158-02	HEAT RADIATOR ASSEMBLY		1	1	1							
3	1402322-03	CARD RACK		1	1	1							
4	1402334-01	CONTACT STRIP		4	4	4							
5	1402335-01	SUPPORT, HEAT RADIATOR		2	2	2							
6	1402355-AA	BLOCK, HINGE		1	1	1							
7	1402355-AB	BLOCK, HINGE		1	1	1							
8	1409097 -01	MOTHER BOARD ASSEMBLY, 525/625		1	-	-							
9	1409097 -04	MOTHER BOARD ASSEMBLY, 525/625			1	1							
10	1373004-01	CARD GUIDE		32	32	32							
11	1409155-04	POWER SUPPLY ASSEMBLY				1							
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23	430-509	RETAINING RING		96	96	96							
24													
25	473 -330	SCREW, MACH, PAN HD, SEMS, 6-32 X .250		16	6	16							
26	475 -085	SCREW, MACH, PAN HD, SEMS, 6-32 X .312		16	6	16							
27	475 -058	SCREW, MACH, PAN HD, SEMS, 6-32 X .375		12	2	12							
28	473 -331	SCREW, MACH, PAN HD, SEMS, 6-32 X .500		6	6	6							
29													
30													
31													
32													
33													
34													
35	501-009	WASHER, PLAIN, 6		28	28	28							
36	501 -684	WASHER, PLAIN, NONMETALLIC HD. 6		2	2	2							

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01	-02	-03	-04						
1	1374214-AA	JUMPER PLUG	P16	1	1	1	1						
2	1409156-01	PWA, REGULATOR		1	-	-	-						
3	1409157	SCHEMATIC	(-)	C	E	J							
4	1409165	HARNESS	REF	REF	REF	REF							
5	1402365-02	PANEL, SIDE		1	1	1	1						
6	1402366-02	PANEL, REAR, PWR. SUP.		1	1	1	1						
7	1430055-01	TRANSFORMER, PWR.	T1	1	1	1	-						
8	1402459-01	JUMPER PLUG, AC POWER	P15	1	1	1	-						
9	1402461-02	BRACKET, CAPACITOR MTG.		1	1	1	1						
10	1402466-02	BRACKET, RECTIFIER MTG.		-	-	-	-						
11	1402319-01	LABEL		1	1	1	1						
12	063-322	CAPACITOR, ALUM., 25V, 14,000 uF	C3,4	2	2	2	2						
13	1406171-01	BRACKET, RECTIFIER MTG.		1	1	1	1						
14	065-017	CLAMP, CAPACITOR	REF: C1-4	4	4	4	4						
15	070-002	FUSE, SLO-BLO; 3A, 125V	F1	1	1	1	1						
16	070-993	FUSE, SLO BLO, 1.5A, 250V	F2	1	1	1	1						
17	1409156-05	PWA REGULATOR		-	1	1	1						
18	084-025	CORD SET, POWER, 3-COND, #18 AWG		1	1	-	-						
19	085-005	FUSE HOLDER	REF: F1,2	2	2	2	2						
20	063-364	CAPACITOR, ALUM, 15V, 47,000 uF	C1,2	2	2	2	2						
21	166-199	CONNECTOR PART, CONTACT, SOCKET, 20-22 AWG		14	14	4	-						
22	166-225	CONNECTOR PART, CONTACT, SOCKET, 16-18 AWG		12	12	2	20						
23	167-024	CONNECTOR PART, BODY, PLUG, 12 POS	REF: P1	1	1	1	1						
24	167-025	CONNECTOR PART, BODY, RECP, 12 POS	REF: J15,16	2	2	2	2						
25	1402348-04	PWA, REGULATOR, POWER SUPPLY		-	1	-	-						
26	171-088	TERMINAL LUG, CRIMP, RING TONGUE #10		5	5	5	5						
27	171-238	TERMINAL LUG, CRIMP, QUICK DISCONNECT		6	6	6	6						
28	172-218	TERMINAL LUG, CRIMP, RING TONGUE, #8		1	1	1	1						
29	264-019	CLAMP, CABLE, STRAIN RELIEF		1	1	1	1						
30	302-335	STRAP, CABLE		A/R	A/R	A/R	A/R						
31	302-429	CLAMP, CABLE		2	2	2	1						
32	084-030	CORDSET, POWER, 3 COND. #18 AWG, 8' LG.		-	-	1	1						
33													
34		WIRE, INSULATED, STRANDED, #16 AWG		A/R	A/R	A/R	-						
35		WIRE, INSULATED, STRANDED, #20 AWG		A/R	A/R	A/R	-						
36													
37		SLEEVING, SHRINK		A/R	A/R	A/R	A/R						



MOTHER BOARD - PARTIAL
ASSY. NO. 1409097



I. C. LIST		
REF. DES.	U9	U1-8 10
AMPEX P/N	586-321	590-611
VENDOR P/N	UA723	UA741TC
VOLTAGE PIN	SHOWN	SHOWN
GROUND PIN	—	—

2-6A/2-6B

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01	-02	-03	-04	-05					
1				-03	-03	-04	-05						
2	103307-01	SPACER, COMPONENT REF: R2,12,15,25,28,41		12	12	12	12	12					
3	1409157	SCHEMATIC		(-)	A	F	J						
4	1409166-01	HARNESS ASSY., PWB REGULATOR PWR. SUPPLY		REF	REF	REF	REF	REF					
5	013-678	DIODE, RECTIFIER, SILICON, 1 AMP CD451 CR1-4, 6-9		8	8	8	8	8					
6													
7	014-247	TRANSISTOR, CD-38, 2N2219 Q3		1	1	1	1	1					
8	014-364	TRANSISTOR, CD-438, 2N2905A Q6		1	1	1	1	1					
9	014-505	TRANSISTOR, CD-445, 2N3251 Q2,8,12,14		4	4	4	4	4					
10	014-506	TRANSISTOR, CD-446, 2N2501 Q5,9,11		3	3	3	3	3					
11	014-720	TRANSISTOR, 2N3740 Q1,7		2	2	2	2	2					
12	014-947	TRANSISTOR, 2N3766 Q4,10		2	2	2	2	2					
13													
14	063-321	CAPACITOR, ALUM. 2000uF, 40V C7,8		2	2	2	2	2					
15													
16	034-177	CAPACITOR, MICA, 100pF, 500V, 5% C10		1	1	1	1	1					
17													
18	037-892	CAPACITOR, FIXED, TANT, 47uF, 20V, 20% C1,4		2	2	2	2	2					
19	037-894	CAPACITOR, FIXED, TANT, 100uF, 10V, 20% C9		1	1	1	1	1					
20	037-954	CAPACITOR, FIXED, TANT, 22uF, 15V, 20% C11		1	1	1	1	1					
21													
22	041-003	RESISTOR, FIXED, COMP, 100 OHM, 1/2W, 5% R67		1	1	1	1	1					
23	041-256	RESISTOR, FIXED, COMP, 560 OHM, 1/2W, 5% R38,51		2	2	2	2	2					
24	041-280	RESISTOR, FIXED, COMP, 820 OHM, 1W, 5% R12,25		2	2	2	2	2					
25	041-667	RESISTOR, FIXED, COMP, 10 OHM, 2W, 5% R2,15,28,41		4	4	4	4	4					
26													
27													
28													
29	058-248	RESISTOR, VARIABLE, 200 OHM, 3/4W R86		1	1	1	1	1					
30	058-339	RESISTOR, VARIABLE, 500 OHM, 3/4W R85		1	1	1	1	1					
31													
32													
33													
34													
35													
36													
37													

AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1409156	SHEET 2 OF 4		K					
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER										
				+01	02	-03	-04	-05						
38	062-624	RESISTOR, FIXED, M.F., 1.0K OHM, 1/8W, 1% R3,16,29,42		4	4	4	4	4						
39	062-639	3.01K OHM, 1/8W, 1% R83		1	1	1	1	1						
40	062-643	2.0K OHM R66,82		2	2	2	2	2						
41	062-940	2.1K OHM, R69		1	1	1	1	1						
42	062-951	2.8K OHM, R59		1	1	1	1	1						
43	062-952	2.87K OHM, R70		1	1	1	1	1						
44	062-968	4.99 K OHM, R84		1	1	1	1	1						
45	062-998	RESISTOR, FIXED, M.F., 18.7K OHM, 1/8W, 1% R35		1	1	1	1	1						
46														
47														
48	030-145	CAPACITOR, CER MONO, 0.1uF, 50V, +20% C2,3,5,6		4	4	4	4	4						
49														
50														
51														
52	066-665	RESISTOR, FIXED, COMP, 1.0K OHM, 1/4W, 5% R4,6,17,19,30,32,43,45,53-58,60-65,72,79		22	22	22	22	22						
53														
54	066-677	68 OHM, R71		1	1	1	1	1						
55	066-689	2.2K OHM, R5,7,18,20,33,46,68,78		8	8	8	8	8						
56	066-810	10 OHM R80,81		2	2	2	2	2						
57	066-811	51 OHM, R1,14,27,40		4	4	4	4	4						
58	066-812	100 OHM, R11,13,24,26,37,39,50,52		8	8	8	8	8						
59	066-830	10K OHM, R10,23,31,36,44,49		6	6	6	6	6						
60														
61	066-841	1.3K OHM, R77		1	1	1	1	1						
62	066-913	220K OHM, R8,21,34,47		4	4	4	4	4						
63	066-938	RESISTOR, FIXED, COMP, 47 OHM, 1/4W, 5% R74,75		2	2	2	2	2						
64	166-226	CONNECTOR PART CONTACT PIN 24-26 AWG J12		4	4	4	4	4						
65	166-227	CONNECTOR PART CONTACT PIN 16-18 AWG J12		4	4	4	4	4						
66														
67														
68	139-820	CONNECTOR, RECP. RECT. 12-PIN BOARD MT. J1		1	1	1	1	1						
69														
70	167-027	CONNECTOR PART, BODY, RECP, RECT, 24-PIN REF: J12,J13		2	2	2	2	2						
71	166-224	CONNECTOR PART, CONTACT, SOCKET, 24-26 AWG REF: J12,13		10	10	10	10	10						
72	166-225	CONNECTOR PART, CONTACT, SOCKET, 16-18 AWG REF: J12,13		10	10	10	10	10						
73														
74	051-770	INDUCTOR, FILTER FL1,2		2	2	2	2	2						
75		WIRE, INSULATED STRANDED, 16 AWG CD569 REF: J12,13	A/R	A/R	A/R	A/R	A/R	A/R						
76		WIRE, INSULATED STRANDED, 24 AWG CD569 REF: J12,13	A/R	A/R	A/R	A/R	A/R	A/R						
77														
78		SLEEVING, POF, SHRINKABLE, BLACK	A/R	A/R	A/R	A/R	A/R	A/R						
79														
80	280-717	SPACER, SWAGE THRD, .250 OD, .312 H, 4-40		6	6	6	6	6						
81														
82														

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01	-02								
1	1402456-02	HEAT RADIATOR		1	1								
2	1409167-01	HARNESS	REF	REF									
3	014-627	TRANSISTOR; POWER; PNP; CD-522 (2N379) Q2,3	2	2									
4	014-630	TRANSISTOR; POWER; NPN; CD-526 (2N3055) Q1	1	1									
5	014-703	TRANSISTOR MTG. HDW, PAD REF: Q1,2,3,4	4	4									
6													
7	059-337	RESISTOR, FIXED, W.W., 20W 0.1 OHM 3% R1,2,3	3	3									
8	047-385	RESISTOR, FIXED, W.W. 20W, .05 OHM, 3% R4	1	1									
9	070-431	FUSE, FAST BLOW, 15 AMP, 32V F1	1	1									
10	130-004	FUSE PART, BLOCK REF: F1	1	1									
11													
12	166-224	CONNECTOR PART, CONTACT, SOCKET, #26-24 AWG REF: P12	4	4									
13	166-225	CONNECTOR PART, CONTACT, SOCKET, #16-18 AWG REF: P12	4	4									
14	166-226	CONNECTOR PART, CONTACT, PIN, #26-24 AWG REF: P12	4	4									
15	166-227	CONNECTOR PART, CONTACT, PIN, #16-18 AWG REF: P12	4	4									
16	167-026	CONNECTOR PART, BODY, PLUG, 24-POS REF: P12	1	1									
17													
18	302-335	STRAP, CABLE	A/R	A/R									
19	302-344	MOUNTING PLATE, CABLE	3	3									
20	471-072	SCREW, MACH, PAN HD, 6-32 X .625 LG REF: Q1-4		8									
21	471-113	SCREW, MACH, PAN HD, X-REC; 2-56 X .250 LG REF: R1-4	8	8									
22	471-333	SCREW, MACH, FLAT HD; X-REC, 6-32 X .188 LG	3	3									
23	472-453	SCREW, MACH, PAN HD, X-REC, 2-56 X .312 LG REF: Q1-4	12	12									
24	473-331	SCREW, MACH, ASSEM. WSHR, 6-32 X .500 LG REF: F1	1	1									
25	475-062	SCREW, MACH, ASSEM. WSHR, 6-32 X .625 LG REF: Q1-4	8	-									
26	501-155	WASHER, PLAIN #2 REF: XQ1-4	4	4									
27	501-188	WASHER, PLAIN, #6, .267 OD REF: F1	1	1									
28	502-023	WASHER, LOCK, I.T.; #2	12	12									
29	580-644	TRANSISTOR COVER REF: Q1-4	4	-									
30	580-244	TRANSISTOR, POWER, NPN, (2N5301) Q4	1	1									
31	580-510	TRANSISTOR MTG. HDW, SOCKET XQ1,2,3,4	4	4									
32	600-057	SLEEVING, PVC, BLACK, .50 I.D.	A/R	A/R									
33	600-196	SLEEVING, TEFLON	A/R	A/R									
34	615-019	WIRE, SOLID, BARE, #18 AWG.	A/R	A/R									
35	582-319	TRANSISTOR COVER W/LOCK WASHER & CAPS REF: Q1-4		4									
36		WIRE, STRANDED, INSULATED, #16 AWG	A/R	A/R									
37		WIRE, STRANDED, INSULATED, #24 AWG	A/R	A/R									

1409097-04

MOTHERBOARD AND CONNECTOR PANEL ASSEMBLY
NEXT HIGHER ASSEMBLY 1409002

REV. K

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER							
				-01	-02	-03	-04				
1				-01	-02	-03	-04				
2											
3	1409099	SCHEMATIC DIAGRAM REF.		(-)	A	F	F				
4											
5	1402341-02	PANEL REAR CONNECTOR		1	1	1	1				
6	1409100-02	HARNISS, MOTHER BOARD			1	1	1				
7	1409100-01	HARNISS		1	-	-	-				
8	063-247	CAPACITOR, ALUM., 1000uF, 16V, +100% C1-5		5	5	5	5				
9	030-095	CAPACITOR, CER., MONO, .1uF, 25V, +20% C15,17		2	2	2	2				
10	064-492	CAPACITOR, CER., DISC, 0.1uF, 12V, +80% -20% C6-14, C16, C15-40		33	33	33	33				
11	139-918	CONNECTOR, SIGNAL CIRCUIT, RECEPT., BNC, ISOLATED, J1,2,8		3	3	3	3				
12	142-026	CONNECTOR, SIGNAL CIRCUIT, RECEPT., BNC, J3-7,9,10		7	7	7	7				
13	145-675	CONNECTOR, SIGNAL CIRCUIT, PC 50 DUAL CONT. XA1-16		16	16	16	16				
14	064-149	CAPACITOR, CER, MONO, 1.0 UF, 100V, ±20% C41,42			2	2	2				
15											
16	172-014	TERMINAL LUG, SOLDER, RING TONGUE, 3/8 STUD, REF. J3-7, J9,10		7	7	-	-				
17	172-014	TERMINAL LUG, SOLDER, RING TONGUE, 3/P STUD, REF.J1-7,J9-10			9	9	9				
18	501-195	WASHER, PLAIN, #4, .115 ID, .209 OD.		2	2	2	6				
19	496-004	NUT, HEX, CAPTIVE WASHER, 4-40, LOCK WASHER		4	4	4	-				
20	470-010	SCREW, CAP, SOCKET HEAD, 4-40, .375 LG.		4	4	4	4				
21	302-379	STRAP, CABLE, 5.4" APPROX. LONG, CD 734		A/R	A/R	A/R	A/R				
22	501-008	WASHER, PLAIN #4		4	4	4	-				
23	302-539	STRAP ASSY. MTG. PLATE, RED NYLON CABLE TIE		9	9	9	9				
24	143-981	CONNECTOR, JACK, PC TIP REF:J1,2		4	4	4	4				
25	602-012	PLUG, SHORTING, (RED) REF:J1,2		2	2	2	2				
26	187-387	INSULATOR SUPPORT REF:J1-10			-	-	10				
27	600-252	SLEEVEING PVC, SHRINK REF: J1-10			-	-	A/R				
28	492-032	NUT, HEX, SMALL PATTERN, FINISHED 4-40					4				
29	502-002	WASHER, LOCK HELICAL SPRING, #4					- 4				

MOTHER BOARD
ASSY NO. 1409097 -
SCHEMATIC NO. 1409099
AW ISSUE D

The diagram illustrates the layout of a Mother Board assembly. Components are labeled as follows:

- XA Series:** XA1, XA2, XA3, XA4, XA5, XA6, XA7, XA8, XA9, XA10, XA11, XA12, XA13, XA14, XA15, XA16.
- C Series:** C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40.
- E Series:** E1, E2, E3, E4, E5, E6, E7, E8, E9, E10, E11, E12, E13, E14, E15, E16, E17, E18, E19.

The diagram includes a detailed view of the XA10 component area, showing its internal structure and connections. It also shows the XA1 component area, which is a large integrated circuit. The XA10 component is a large, rectangular component with many pins. The XA1 component is a large, rectangular component with many pins. The XA10 component is a large, rectangular component with many pins. The XA1 component is a large, rectangular component with many pins.

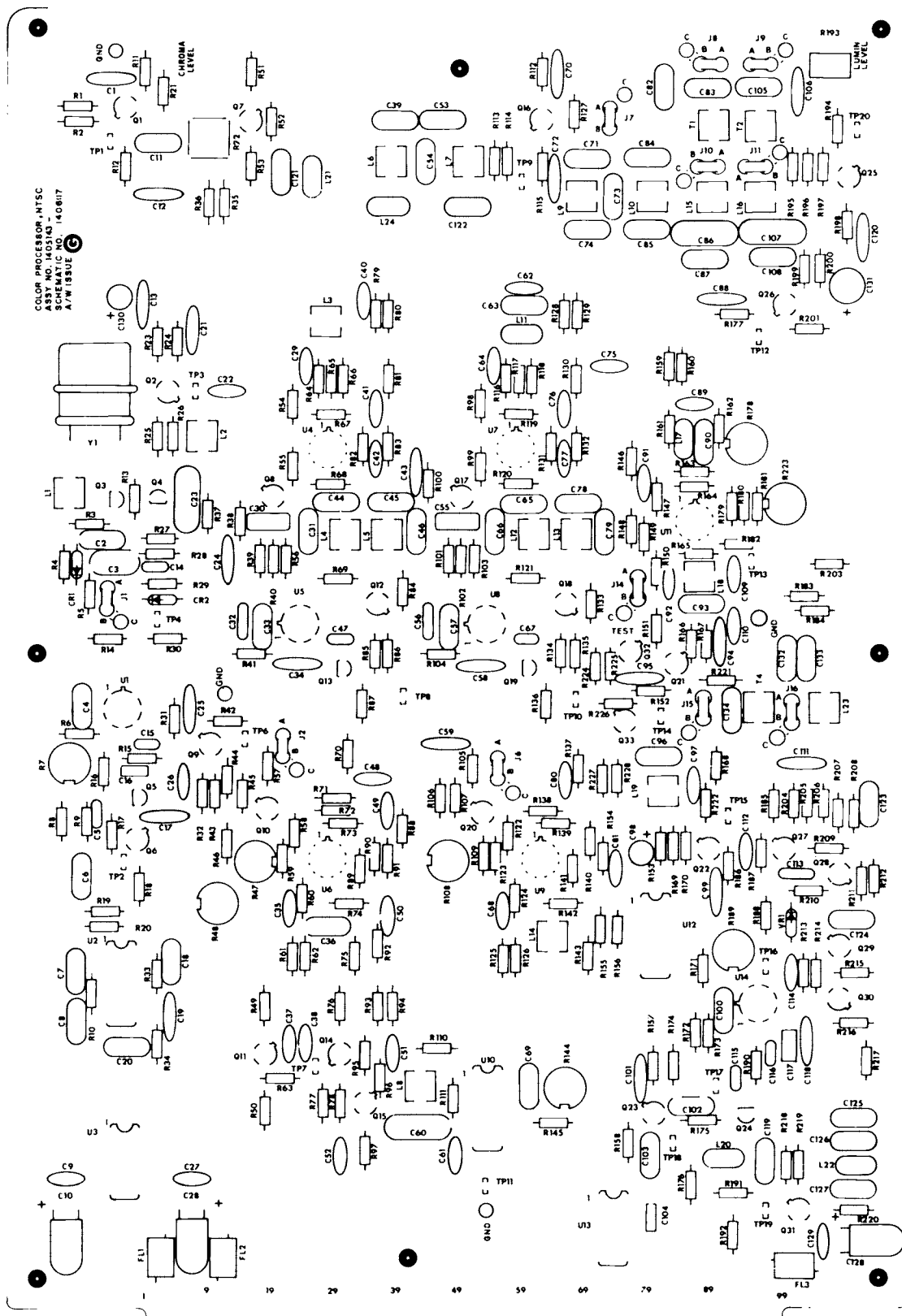
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01	-02	-03	-04	-05	-06				
1				01	01	02	03	05					
2	1406117	SCHEMATIC	(A)	(B)	(C)	(D)	(E)	(F)	(H)				
3	1374188-01	INDUCTOR, FILTER FLI-3	3	3	3	3	3	3	3				
4	1374388-BZ	INDUCTOR, VARIABLE, 0.68 uH, $\pm 10\%$ L16					1		1				
5	1374388-BZ	INDUCTOR, VARIABLE, 0.68uH, $\pm 10\%$ L16,21	2	2	2	-	-	-	-				
6	1374388-AD	INDUCTOR, VARIABLE, 2.2uH, L2,8	2	2	2	2	2	2	2				
7	1374388-AL	INDUCTOR, VARIABLE, 8.2uH, L10,15,23	3	3	3	-	-	-	-				
8	1374388-AM	INDUCTOR, VARIABLE, 10uH, L3,14,19	3	3	3	3	3	3	3				
9	1374388-AN	INDUCTOR, VARIABLE, 12uH, L7	1	1	1	-	-	-	-				
10	1374388-AP	INDUCTOR, VARIABLE, 15uH, L9,18	2	2	2	2	2	2	2				
11	1374388-AU	INDUCTOR, VARIABLE, 33uH, $\pm 10\%$ L6	1	1	1	-	-	-	-				
12	1374371-AT	INDUCTOR, VARIABLE, 100uH, $\pm 2\%$ L5,13	2	2	2	2	2	2	2				
13	1374371-AU	INDUCTOR, VARIABLE, 130uH, $\pm 2\%$ L4,12	2	2	2	2	2	2	2				
14	1374388-AW	INDUCTOR, VARIABLE, 47uH, $\pm 10\%$ L1	1	1	1	1	1	1	1				
15	1374388-AF	INDUCTOR, VARIABLE, 3.3uH, $\pm 10\%$ L7					1	1	1				
16	1374388-AR	INDUCTOR, VARIABLE, 18uH, $\pm 10\%$ L6					1	1	1				
17	1374388-AL	INDUCTOR, VARIABLE, 8.2uH, $\pm 10\%$ L10,15					2	2	2				
18	068-126	INDUCTOR, FIXED, 18uH, $\pm 5\%$ L24					1	1	1				
19	051-870	INDUCTOR, FIXED, 10uH, $\pm 5\%$ L17,20,22	3	3	3	3	3	3	3				
20	068-025	INDUCTOR, FIXED, 100uH, $\pm 5\%$ L11	1	1	1	1	1	1	1				
21	068-117	INDUCTOR, FIXED, 8.2uH, $\pm 5\%$ L21					1	1	1				
22	1378591-AC	TRANSFORMER, BIFILAR, 10.8uH, $\pm 2\%$ T3	1	1	1	-	-	-	-				
23	1378591-AJ	TRANSFORMER, BIFILAR, 44.3uH, T1	1	1	1	-	-	-	-				
24	1378591-AK	TRANSFORMER, BIFILAR, 67uH, T2	1	1	1	-	-	-	-				
25	1378591-AL	TRANSFORMER, BIFILAR, 27uH, $\pm 2\%$ T4	1	1	1	-	-	-	-				
26	1379491-AL	TRANSFORMER, BIFILAR, 26.9uH, $\pm 2\%$ T4					1	1	1				
27	1379491-AK	TRANSFORMER, BIFILAR, 67uH, $\pm 2\%$ T2					1	1	1				
28	1379491-AJ	TRANSFORMER, BIFILAR, 44.3uH, $\pm 2\%$ T1					1	1	1				
29	013-332	DIODE, ZENER, 4.7V, (1N750A) VRI	1	1	1	1	1	1	1				
30	013-599	DIODE, SWITCHING, (1N4531) CR2	1	1	1	1	1	1	1				
31	038-298	DIODE, VARACTOR, (MV1642) CR1	1	1	1	1	1	1	1				
32	014-505	TRANSISTOR, (PNP) (2N3251) 07,11,12,15,18,25,26,29,31,32					10	10	10				
33	014-506	TRANSISTOR, (NPN) (2N2501) 01,2,6,8,9,10,14,16,17,20-23,27,28,30,33					17	17	17				
34	580-453	TRANSISTOR, FET, (2N5639-5) Q5,13,19,24	4	4	4	4	4	4	4				
35	580-226	TRANSISTOR, NPN, (2N4124-5) Q3,4	2	2	2	2	2	2	2				
36	014-505	TRANSISTOR, (PNP) 07,11,12,15,18,25,26,29,31	9	9	9	-	-	-	-				
37	014-506	TRANSISTOR, (NPN) 01,2,6,8,9,10,14,16,17,20-23,27,28,30	16	16	16	-	-	-	-				

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405143	SHEET 2		REV P																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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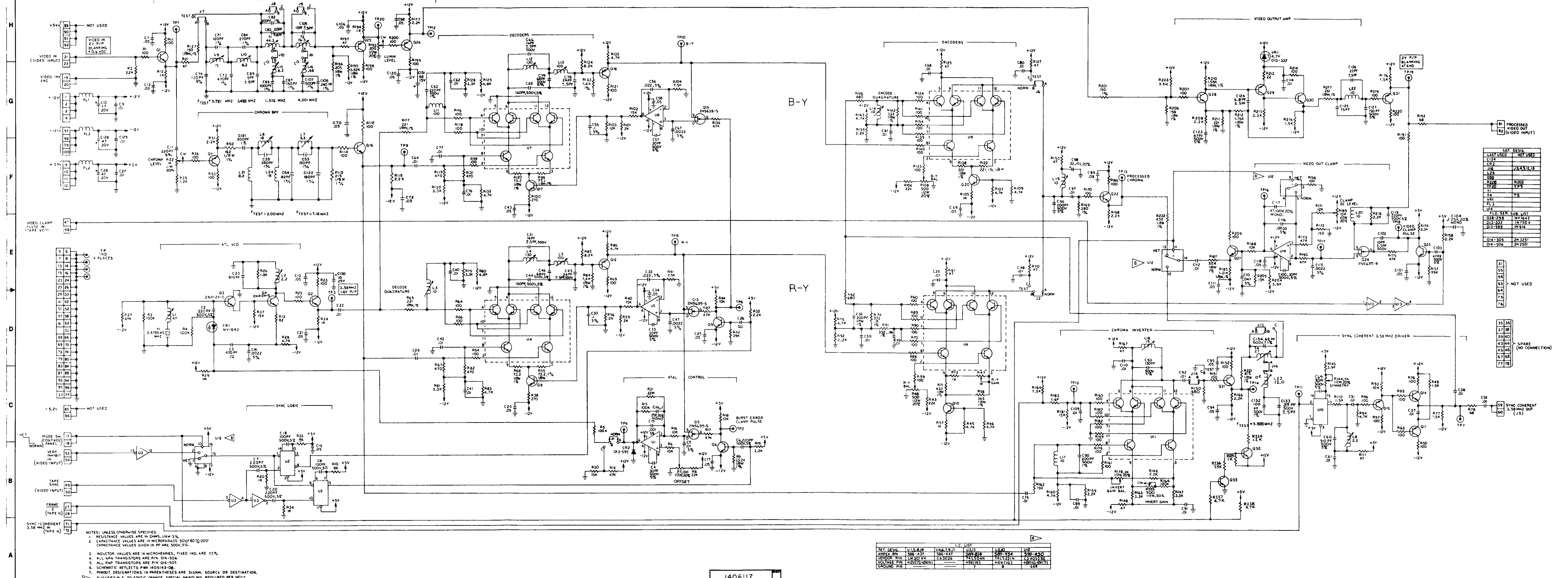
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405143 SHEET 3	REV P							
ITEM NO.	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
					-01	-02	-03	-04	-05	-06				
83	056-022		CAPACITOR, FIXED, MICA 6.8pF $\pm 0.5pF$	C124	1	1	1	1	1	1				
84	056-164		CAPACITOR, FIXED, MICA 22pF, $\pm 0.5pF$	C126	1	1	1	1	1	1				
85	056-291		CAPACITOR, FIXED, MICA 470pF, $\pm 1\%$	C3,73,122	3	3	3	-	-	-				
86	064-116		CAPACITOR, FIXED, CER, 0.01uF, 50V, $\pm 80\%$ +80% C9,22,26,27,29, -20% 35,37,38,40,41,				34	34	34	34				
87			42,48-52,61,62,64,68,75,76, 77,80,81,89,91,92,97,109,110,112,114,129											
88	069-107		CAPACITOR, FIXED, MYLAR .0033uF, 50V, $\pm 5\%$	C116	1	1	1	1	1	1				
89														
90	069-113		0.1uF	C30,55	2	2	2	2	2	2				
91	069-109		.0022uF	C14,47,67, 115	4	4	4	4	4	4				
92	069-090		.001uF	C15	1	1	1	1	1	1				
93	069-092		.047uF	C113	1	1	1	1	1	1				
94	069-097		.022uF	C32,56	2	2	2	2	2	2				
95	069-100		CAPACITOR, FIXED, MYLAR, .01uF, 50V, $\pm 5\%$	C5	1	1	1	1	1	1				
96														
97	064-116		CAPACITOR, FIXED, CER. 0.01uF, 50V, $\pm 80\%$ -20% C9,22,27, 29,35,37,38,40,41,42,48,49,50,51, 52,61,62,64,68,75,76,77,80,81,89, 91,92,97,109,110,112,114,129		33	33	-	-	-	-				
98														
99	064-569		CAPACITOR, FIXED, CER. .05uF, 50V, $\pm 80\%$ -20% C1,12,13,17, 19,21,24,25,34,43,58,59,70,72,88, 94,95,99,101,106,111,118,120		23	23	23	23	23	23				
100	030-095		CAPACITOR, MONO., .1uF, 25V, 20%	C16,104	2	2	2	2	2	2				
101	064-309		CAPACITOR, MONO. .47uF 100V, $\pm 20\%$	C117	1	1	1	1	1	1				
102														
103	058-991		RESISTOR, VAR., CER, 200 OHM, 1/2W, 20%	R223	1	1	1	1	1	1				
104	058-990		RESISTOR, VAR., CER, 100 OHM, 1/2W, $\pm 20\%$	R7	1	1	1	1	1	1				
105	058-042		200 OHM, SIDE ADJ.	R193	1	1	1	1	1	1				
106	058-993		500 OHM,	R48,108	2	2	2	2	2	2				
107	058-994		1K	R47	1	1	1	1	1	1				
108	058-995		2K	R178	1	1	1	1	1	1				
109	058-997		5K	R144	1	1	1	1	1	1				
110	058-998		RESISTOR, VAR., CER, 10K 1/2W, $\pm 20\%$	R189	1	1	1	1	1	1				
111	075-150		RESISTOR, VAR., CER, 1K, .1W, $\pm 20\%$	R22	1	1	1	1	1	1				
112	062-834		RESISTOR, FIXED, M.F. 73.2 OHM 1/8W, $\pm 1\%$	R55,68,99, 120	4	4	4	4	4	4				
113	062-864		150 OHM	R127,201	2	2	2	2	2	2				
114	066-790		158 OHM	R206	1	1	1	1	1	1				
115	062-873		196 OHM	R113	1	1	1	-	-	-				
116	066-191		205 OHM	R52,196	2	2	2	-	-	-				
117	062-877		221 OHM	R65,117,122, 211	4	4	4	4	4	4				
118	062-881		261 OHM	R217	1	1	1	1	1	1				
119	066-170		280 OHM	R169	1	1	1	1	1	1				
120	062-884		301 OHM	R138	1	1	1	1	1	1				
121	062-887		332 OHM	R74,91,142	3	3	3	3	3	3				
122	062-890		365 OHM	R58	1	1	1	1	1	1				
123	062-898		432 OHM	R71	1	1	1	1	-	-				
124	062-879		RESISTOR, FIXED, M.F. 237 OHM, 1/8W, $\pm 1\%$	R187	1	1	1	-	-	-				

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405143	SHEET 4		REV F					
ITEM NO.	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
					-01	-02	-03	-04	-05	-06				
125	062-866		RESISTOR, FIXED, M.F., 162 OHM, 1/4W, $\pm 1\%$	R52					1	1				
126	062-929		1.15K	R212		1	1	1	1	1	1			
127	062-625		1.21K	R185		1	1	1	1	1	1			
128	062-626		1.4K	R84, 133	2	2	2	2	2	2	2			
129	066-041		1.58K	R210		1	1	1	1	1	1			
130	062-961		3.92K	R195		1	1	1	1	1	1			
131	066-002		23.2K	R9		1	1	1	1	1	1			
132	062-876		215 OHM	R113					1	1	1			
133	066-194		RESISTOR, FIXED, M.F., 324 OHM, 1/4W, $\pm 1\%$	R221, 222	2	2	2	-	-	-				
134	041-801		RESISTOR, FIXED, CARB., 22M OHM, 1/4W, $\pm 5\%$	R31		1	1	1	1	1	1			
135	066-673		C.F. 1.0M OHM	R29		1	1	1	1	1	1			
136	066-660		22 OHM	R213		1	1	1	1	1	1			
137	066-938		47 OHM	R21, 61, 70, 111, 125, 137, 148, 153, 167, 197	10	10	10	10	10	10	10			
138	066-677		68 OHM	R78, 192	2	2	2	2	2	2	2			
139	066-835		82 OHM	R13		1	1	1	1	1	1			
140	066-812		100 OHM, 1/4W, $\pm 5\%$	R1, 11, 23, 25, 36, 50, 53, 54, 59, 60, 63, 64, 66, 69, 73, 76, 88, 89, 90, 95, 96, 97, 98, 112, 114, 116, 118, 121, 123, 124, 139, 140, 141, 149, 151, 152, 154, 161, 165, 170, 179, 180, 182, 186, 191, 198, 199, 200, 207, 209, 214, 219, 220	53	53	53	53	53	53				
141	066-813		150 OHM, 1/4W, $\pm 5\%$	R162, 172	2	2	2	2	2	2	2			
142	066-814		270 OHM	R38, 100	2	2	2	2	2	2	2			
143	066-818		470 OHM	R67, 82, 119, 131	4	4	4	4	4	4	4			
144	066-840		680 OHM	R62, 126, 150	3	3	3	3	3	3	3			
145	066-665		1.0K	R12, 20, 24, 34, 57, 72, 105, 194	8	8	8	-	-	-	-			
146	066-715		1.2K	R35		1	1	-	-	-	-			
147	066-824		1.5K	R49, 77, 110, 176, 216	5	5	5	5	5	5	5			
148	066-825		1.6K	R183		1	1	1	1	1	1			
149	066-675		1.8K	R26		1	1	1	1	1	1			
150	066-826		2.0K	R39, 101	2	2	2	2	2	2	2			
151	066-689		2.2K, 1/4W, $\pm 5\%$	R19, 32, 51, 92, 115, 146, 155, 158, 159, 166, 168, 177, 208, 218	14	14	14	14	14	14	14			
152														
153	066-720		3.3K, 1/4W, $\pm 5\%$	R79, 81, 94, 128, 130, 147, 163, 174, 215, 203	10	-	-	-	-	-	-			
154	066-827		3.9K	R145, 204	2	2	2	2	2	2	2			
155	066-668		4.7K	R28, 45, 46, 75, 83, 107, 109, 132, 135, 143, 160, 86	12	-	-	-	-	-	-			
156	066-829		6.8K	R10, 33, 80, 129	4	4	-	-	-	-	-			
157	066-711		7.5K	R41, 104, 184	3	3	3	-	-	-	-			
158	066-669		8.2K	R85, 134	2	2	2	2	2	2	2			
159	066-830		10K	R6, 16, 18, 44, 93, 156, 188	7	7	7	7	7	7	7			
160	066-865		12K	R56, 103, 171	3	3	-	-	-	-	-			
161	066-856		15K	R30, 37, 40, 102, 181	5	5	-	-	-	-	-			
162	066-712		RESISTOR, FIXED, C.F., 22K, 1/4W, $\pm 5\%$	R2, 8, 43, 106	4	4	4	4	4	4	4			

AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405143 SHEET 5		REV P	
ITEM NO	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER					
				-01	-02	-03	-04	-05	-06
163	066-860	RESISTOR, FIXED, C.F., 39K 1/4W, $\pm 5\%$	R42,157	2	2	2	2	2	2
164	066-717	RESISTOR, FIXED, C.F., 47K 1/4W, $\pm 5\%$	R190, 14, 17, 27, 87, 136, 173, 175,	8	8	8	8	8	8
165	066-849	RESISTOR, FIXED, C.F., 100K 1/4W, $\pm 5\%$	R3,4,5,15	4	4	4	4	4	4
166	066-661	RESISTOR, FIXED, C.F., 120 Ω 1/4W, $\pm 5\%$	R164	1	1	1	1	1	1
167	066-864	RESISTOR, FIXED, C.F., 13K, 1/4W, $\pm 5\%$	R205	1	1	1	1	1	1
168	017-158	CRYSTAL UNIT, 3.579545 MHZ	Y1	1	1	1	1	1	1
169	302-542	STRAP, RUBBER, 2 IN. MOUSE TAIL	(REF:Y1)	1	1	1	1	1	1
170	602-044	PLUG, SMOKING	J1,2,4-16	15	15	15	-	-	-
171	143-981	JACK, P.C. TIP	(REF:J1,2,4-16)	44	44	44	-	-	-
172									
173	187-259	TERMINAL, TEST POINT	TP1-TP20	20	20	20	-	-	-
174	187-259	TERMINAL, TEST POINT	TP1-4,6-20				19	19	19
175	473-325	SCREW, MACH. ASSD. WASHER, 4-40X.312 LG		7	7	7	7	7	-
176	501-169	WASHER, PLAIN, #4		7	7	7	7	7	-
177	471-062	SCREW, MACH. PAN HD. XREC, 4-40 X .375 LG		1	1	1	1	1	1
178	502-002	WASHER, LOCK, HELICAL SPRING #4		1	1	1	1	1	1
179	283-105	SPACER, UNTHREADED, PLAIN		1	1	1	1	1	1
180	474-500	SCREW, MACH. PAN HD. XREC, 4-40 X .312 LG (ASSEM. WSHR)							7
181	280-130	SPACER, TRANSISTOR, TO-18	Q1,2,6-12,14-18, REF:20-23,25-31	25	25	25	-	-	-
182	280-130	SPACER, TRANSISTOR, TO-18	REF: Q1,2,6-12,14-18, 20-23,25-33				27	27	27
183	075-172	BRACKET	REF: R22	1	1	1	1	1	1
184	230-033	KNOB	REF: R22	1	1	1	1	1	1
185									
186	066-720	RESISTOR, FIXED, C.F., 3.3K OHMS, 1/4W, $\pm 5\%$	R79,81,128, 130,147,163, 174,203,215		9	9	9	9	9
187									
188	066-668	RESISTOR, FIXED, C.F., 4.7K OHMS, 1/4W, $\pm 5\%$	R28,45,46,75, 83,86,94,107, 109,132,135,143,160	13	13	-	-	-	-
189									
190	066-829	RESISTOR, FIXED, C.F., 6.8K OHMS, 1/4W, $\pm 5\%$	R80,129			2	2	2	2
191	066-865	RESISTOR, FIXED, C.F., 12K OHMS, 1/4W, $\pm 5\%$	R10,56,103,171			4	4	4	4
192	066-856	RESISTOR, FIXED, C.F., 15K OHMS, 1/4W, $\pm 5\%$	R30,33,37,40, 102,181			6	6	6	6
193	062-895	RESISTOR, FIXED, M.F., 412 OHMS, 1/8W, $\pm 1\%$	R221			1	1	1	1
194	066-668	RESISTOR, FIXED, C.F., 4.7K OHMS, 1/4W, $\pm 5\%$	R28,45,46,75, 83,86,94,107, 109,132,135,143,160,227,228			15	15	15	15
195									
196	066-191	RESISTOR, FIXED, M.F., 205 OHMS, 1/8W, $\pm 1\%$	R196			1	1	1	1
197	066-194	RESISTOR, FIXED, M.F., 324 OHMS, 1/8W, $\pm 1\%$	R187			1	1	1	1
198	066-665	RESISTOR, FIXED, C.F., 1.0K OHMS, 1/4W, $\pm 5\%$	R12,20,24,34, 57,72,105,194, 225			9	9	9	9
199	066-715	RESISTOR, FIXED, C.F., 1.2K OHM, 1/4W, $\pm 5\%$	R35,224			2	2	2	2
200	066-711	RESISTOR, FIXED, C.F., 7.5K OHMS, 1/4W, $\pm 5\%$	R41,104,184 226			4	4	4	4
201	062-879	RESISTOR, FIXED, M.F., 237 OHMS, 1/8W, $\pm 1\%$	R222			1	-	-	-
202	062-898	RESISTOR, FIXED, M.F., 432 OHMS, 1/8W, $\pm 1\%$	R71,222				2	2	2



Assembly No. 1405143-06P. Color Processor PWA, A2



1405134-10

VIDEO INPUT PWA, A3
NEXT HIGHER ASSEMBLY 1409133

REV. V

ITEM NO.	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER										
					-01	-02	-03	-04	-05	-06	-07	-08	-09	-10	
1					-01	-01	-03	-04	-04	-05	-06	-07	-08	-09	-10
2															
3	1405136	SCHEMATIC			(A)	A	B	C	D	E	F	G	H	I	J
4															
5	1374108-01	INDUCTOR, FILTER	FL3		1	1	1	1	1	1	1	1	1	1	1
6	1374188-01	INDUCTOR, FILTER	FL1,2,4-7		6	6	6	6	6	6	6	6	6	6	6
7															
8															
9	1374388-AE	INDUCTOR, VARIABLE, 2.7uH	L1		1	1	1	1	1	1	1	1	1	1	1
10	1374388-AK	INDUCTOR, VARIABLE, 6.8uH	L2,8,9		3	3	3	3	3	3	3	3	3	3	3
11	1374388-AD	INDUCTOR, VARIABLE, 2.2uH	L3		1	1	1	1	1	1	1	1	1	1	1
12															
13															
14															
15	1379491-AL	TRANSFORMER, BIFILAR, VARIABLE, 26.9uH	T1		1	1	1	1	1	1	1	1	1	1	1
16															
17															
18															
19															
20	1402331-AD	LABEL, MODULE			1	1	1	1	1	1	1	1	1	1	1
21	1402332-01	EXTRACTOR ARM			1	1	1	1	1	1	1	1	1	1	1
22	1402333-AA	SHIELD			1	1	1	1	1	1	1	1	1	1	1
23															
24	064-116	CAPACITOR, CER., 0.01uF, 50V, +80%/-20%	C6,32,78,88,92,94,95,127		8	8	8	8	8	8	8	8	8	8	8
25															
26	064-492	CAPACITOR, CER., 0.1uF, 12V, +80%/-20%	C51,56,58,76,81,99,107,108,114,120,124,136,129		13	13	13	13	13	13	13	13	13	13	13
27	064-569	CAPACITOR, CER., 0.05uF, 50V, +80%/-20%	C1,2,7,10,11,13-15,17,18,24,28,29,34-37,41,42,45,49,52,53,55,64,65,67,70,72,73,85-87,89,93,96,98,101,103,105,106,116,117,119,126,131,132,138,140		49	49	49	49	49	49	49	49	49	49	49
29															
30	064-307	CAPACITOR, CER. MONO, 0.22uF, 100V, 20%	C102		1	1	1	1	1	1	1	1	1	1	1
31	064-316	CAPACITOR, CER. MONO, 2.2uF, 50V, 20%	C3		1	1	1	1	1	1	1	1	1	1	1
32															
33	030-095	CAPACITOR, CER. MONO, 0.1uF, 25V, 20%	C33,44,46		3	3	3	3	3	3	3	3	3	3	3
34															
35															

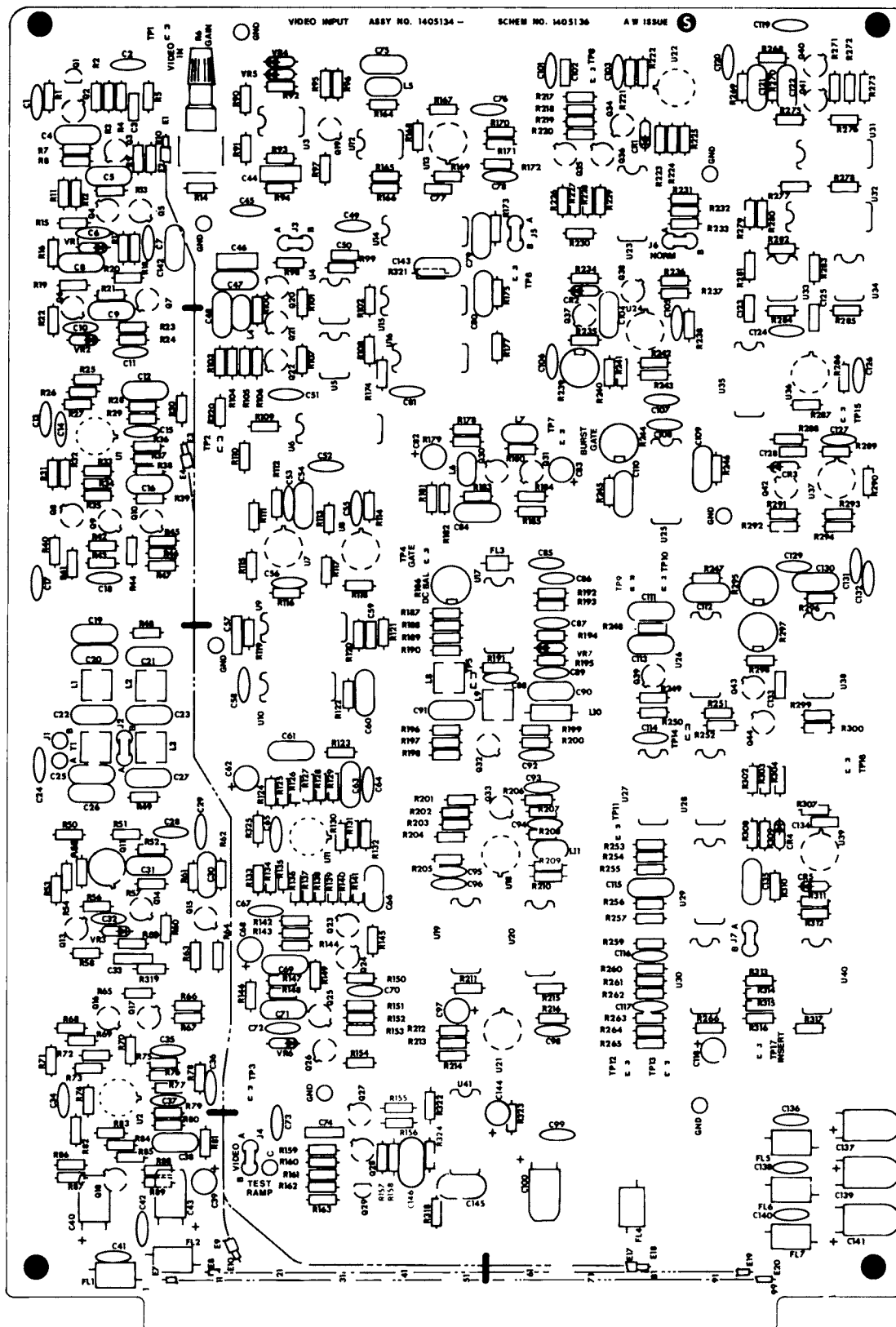
AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405134	SHEET 2										REV ✓
ITEM NO	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER												
					+01	+02	+03	+04	+05	+06	+07	+08	+09	+10			
36	034-156		CAPACITOR, MICA, 5pF, 500V, $\pm .5pF$	C71	1	1	-	-	-	-	-	-	-	-			
37	034-177	↑	100pF, 500V, 5%	C60,79,80,111,113,115,143	7	7	7	7	7	7	7	7	7	7			
38	056-105		18pF, 500V, $\pm .5pF$	C26				-	1		1	1	1	1			
39	034-215		10pF, 500V, $\pm .5pF$	C12,30,61	-	-	3	3	3		3	3	3	3			
40	034-215		10pF, 500V, $\pm .5pF$	C12,30,61,63	4	4	-	-	-	-	-	-	-	-			
41	034-219		120pF, 500V, 1%	C20	1	1		1	1		1	1	1	1			
42	034-224		160pF, 500V, 1%	C54	1	1		1	1		1		1	1			
43	034-240		220pF, 500V, 5%	C121,122,130,135	4	4		4	4		4	4	4	4			
44	034-251		39pF, 500V, $\pm .5pF$	C8,31	2	2	-	-	-	-	-	-	-	-			
45	034-251		39pF, 500V, $\pm .5pF$	C8	-	-	1	1	-	-	-	-	-	-			
46	034-239		130pF, 500V, 1%	C22	1	1		1	1		1		1	1			
47	034-287		300pF, 500V, 1%	C84	1	1		1	1		1		1	1			
48	034-376		33pF, 500V, $\pm .5pF$	C5,25,31	-	-	3	3	3		-	-	-	-			
49	034-319		270pF, 500V, 5%	C110	1	1		1	1		1	1	1	1			
50	034-313		250pF, 500V, 1%	C90,91	2	2		2	2		2	2	2	2			
51	034-376		33pF, 500V, $\pm .5pF$	C5,25	2	2	-	-	-	-	-	-	-	-			
52	034-345		3pF, 500V, $\pm .5pF$	C4	1	1		1	1		1		1	1			
53	034-540		51pF, 500V, 1%	C19	1	1		1	1		1		1	1			
54	034-541		62pF, 500V, 1%	C16,38,47,66,75	5	5		5	5		5	5	5	5			
55	034-543		240pF, 500V, 1%	C109	1	1		1	1		1		1	1			
56	034-950	↓	1000pF, 100V, $\pm 5\%$	C145				1	1		-	-	-	-			
57	034-918		CAPACITOR, MICA, 68pF, 500V, 1%	C23	1	1		1	1		1		1	1			
58	056-105		CAPACITOR, MICA, 18pF, 500V, $\pm .5pF$	C9,26,142	3	3	-	-	-	-	-	-	-	-			
59	056-163	↑	470pF, 500V, 5%	C112	1	1		1	1		1	1	1	1			
60	056-105	↑	18pF, 500V, $\pm .5pF$	C9,26	-	-	2	2	-	-	-	-	-	-			
61	056-291		470pF, 500V, 1%	C27	1	1		1	1		1	1	1	1			
62	056-412		36pF, 500V, $\pm .5pF$	C21	1	1		1	1		1	1	1	1			
63	056-679	↓	27pF, 500V, $\pm .5pF$	C69	1	1		1	1		1	1	1	1			
64	056-680		CAPACITOR, MICA, 43pF, 500V, $\pm .5pF$	C48	1	1		1	1		1		1	1			
65	034-251		CAPACITOR, MICA, 39pF, 500V, $\pm .5pF$	C8,9				-	2		2	2	2	2			
66	037-892		CAPACITOR, TANT, 47uF, 20V, 20%	C40,43,100,137,139,141	6	6		6	6		6	6	6	6			
67	037-954		CAPACITOR, TANT, 22uF, 15V, 20%	C39,62,68,82,83,97	6	6		6	6		6	6	6	6			
68	037-908		CAPACITOR, TANT, 4.7uF, 35V, 20%	C118	1	1		-	-		-	-	-	-			
69	037-908		CAPACITOR, TANT, 4.7uF, 35V, 20%	C118,144				2	2		2	2	2	2			
70	069-090		CAPACITOR, POLY, .001uF, 50V, 5%	C50,104	2	2		2	2		-	-	-	-			
71	069-092	↑	.047uF, ↑	C57	1	1		1	1		1	1	1	1			
72	069-097		.022uF	C74	1	1		1	1		1	1	1	1			
73	069-100		.01uF	C77,59,123,125,134	5	5		5	5		5	5	5	5			
74	069-107	↓	.0033uF ↓	C133	1	1		1	1		1	1	1	1			
75	069-109		CAPACITOR, POLY, .0022uF, 50V, 5%	C128	1	1		1	1		1	1	1	1			
76	034-950		CAPACITOR, MICA, 1000pF, 100V, $\pm 5\%$	C145,146	-	-		-	2		-	-	-	-			
77	034-950		CAPACITOR, MICA, 1000pF, 100V, $\pm 5\%$	C145,146,104							3	3	3	3			
78	034-376		CAPACITOR, MICA, 33pF, 500V, $\pm .5pF$	C5,25,31,63							4	4	4	4			
79	069-090		CAPACITOR, POLY, .001uF, 50V, 5%,	C50							1	1	1	1			
80																	

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405134	SHEET 3											REV V
ITEM NO.	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER													
					-0	-01	-02	-03	-04	-05	-06	-07	-08	-09	-10			
81	013-332		DIODE, ZENER, 4.7V, CD32, (1N750A)	VR4,5	2	2	2	2	2	2	2	2	2	2				
82	013-358		ZENER, 5.1V, CD32, (1N751A)	VR1,3	2	2	2	2	2	2	2	2	2	2				
83	013-383		ZENER, 9.1V, CD32, (1N757A)	VR7	1	1	1	1	1		1	1	1	1				
84	013-599		CD458, (1N4153)	CR1-5	5	-	-	-	-	-	-	-	-	-				
85	013-830		DIODE, ZENER, 16.0V, CD32, (1N966B)	VR2,6	2	2	2	2	2	2	2	2	2	2				
86	013-599		DIODE, CD458, 1N4153	CR1-7		7	-	-	-	-	-	-	-	-				
87	013-599		DIODE, CD458, (1N4153)	CR1-5	-	-	5	5	5	5	5	5	5	5				
88																		
89	066-652		RESISTOR, C.F., 470K, 1/4W, 5%	R14,264	2	2	2	2	2	2	2	2	2	2				
90	066-660		22 OHM	R3	1	1	-	-	-	-	-	-	-	-				
91	066-662		200 OHM	R179,189	2	2	2	2	2	2	2	2	2	2				
92	066-663		220 OHM	R92	1	1	1	1	1	1	1	1	1	1				
93	066-664		510 OHM	R188,190	2	2	2	2	2	2	2	2	2	2				
94	066-665		1K	R2,23,95,116,118 122,153,167,171, 208,224,248,312, 321	14	14	-	-	-	-	-	-	-	-				
95	066-666		2.7K	R1,11,50	3	3	-	-	-	-	-	-	-	-				
96	066-667		3K	R64	1	1	-	1	1	-	1	1	1	1				
97	066-668		4.7K	R139,155,156,168 177,206,218,225, 226,231,233,269, 270,284,285,302, 303	17	17	17	17	17	17	17	17	17	17				
98																		
99	066-675		1.8K	R127,178	2	2	-	-	-	-	-	-	-	-				
100	066-689		2.2K	R37,79,96,104- 106,199,229,234, 236,237,291,292, 311	14	14	-	-	-	-	-	-	-	-				
101	066-711		7.5K	R137,146	2	2	2	2	2	2	2	2	2	2				
102	066-712		22K	R120,251,308,314	4	4	4	4	4	4	4	4	4	4				
103	066-717		47K	R217,298,309	3	3	3	3	3	3	3	3	3	3				
104	066-718		5.6K	R46,66,78,132, 240,241	6	6	-	-	-	-	-	-	-	-				
105	066-720		3.3K	R94,228,252,299	4	4	4	4	4	4	4	4	4	4				
106	066-812		100 OHM	R26,36,39,45,47, 61,62,65,67,72, 77,81,97,125,131 150,151,162,185 198,202	2	2	-	-	-	-	-	-	-	-				
107	066-817		430 OHM	R42,44,68,69,212	5	5	5	5	5	5	5	5	5	5				
108	066-815		300 OHM	R195	1	1	1	1	1	1	1	1	1	1				
109	066-839		560 OHM	R192	1	1	1	1	1	1	1	1	1	1				
110	066-817		430 OHM	R18,42,44,59,68, 69,212	7	-	-	-	-	-	-	-	-	-				
111	066-818		470 OHM	R103,280,282	3	3	-	-	-	-	-	-	-	-				
112	066-820		750 OHM	R27,83	2	2	-	-	-	-	-	-	-	-				
113	066-822		910 OHM	R10,52,214	3	3	-	-	-	-	-	-	-	-				
114	066-823		1.1K	R191,194	2	2	2	2	2	2	2	2	2	2				
115	066-826		2K	R98,108,235,315	4	4	4	4	4	4	4	4	4	4				
116	066-827		3.9K	R230	1	1	-	1	1	1	1	1	1	1				
117	066-829		6.8K	R21,227	2	2	-	-	-	-	-	-	-	-				
118	066-830		RESISTOR, C.F., 10K, 1/4W, 5%	R107,134,164,165 174,211,213,220, 232,255,257,266, 271-273,278,287, 300,304,310	20	20	20	-	-	-	-	-	-	-				
119																		
120																		

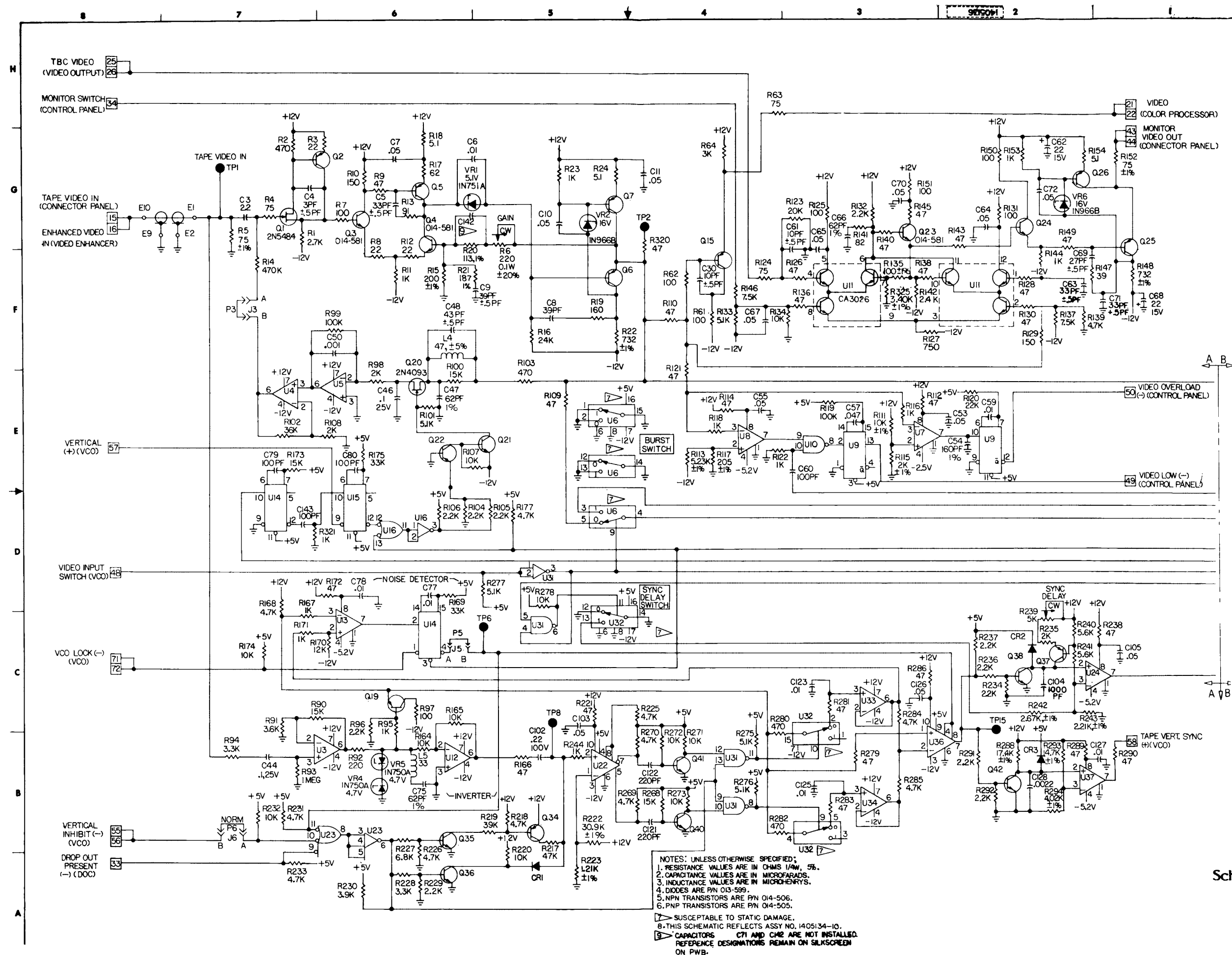
AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405134	SHEET 4		RFV ✓						
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER											
				-01	-02	-03	-04	-05	-06	-07	-08	-09	-10		
121	066-813	RESISTOR, C.F., 150 OHM, 1/4W, 5% R10,52				2	2	2	2	-	-	-	-		
122	066-835	RESISTOR, C.F., 82 OHM, 1/4W, 5% R141		1	1	1	1	1	1	1	1	1	1		
123	066-836	91 OHM R13		1	1	1	1	1	1	1	1	1	1		
124	066-840	680 OHM R184		1	1	1	1	1	1	1	1	1	1		
125	066-841	1.3K R180,197		2	2	2	2	2	2	2	2	2	2		
126	066-842	5.1K R101,133,275-277		5	5	5	5	5	5	5	5	5	5		
127	066-843	6.2K R144		1	1	-	-	-	-	-	-	-	-		
128	066-845	24K R16,53		2	2	2	2	2	2	2	2	2	2		
129	066-847	33K R169,175,247		3	3	3	3	3	3	3	3	3	3		
130	066-849	100K R99,119		2	2	2	2	2	2	2	2	2	2		
131	066-673	1MEG R93		1	1	1	1	1	1	1	1	1	1		
132	076-053	390K R260		1	1	1	1	1	1	1	1	1	1		
133	066-855	39 OHM R147		1	1	1	1	1	1	1	1	1	1		
134	066-856	15K R90,100,173,268,296		5	5	5	5	5	5	5	5	5	5		
135	066-860	39K R219,256		2	2	2	2	2	2	2	2	2	2		
136	066-863	3.6K R43,71,91		3	3	3	3	3	3	3	3	3	3		
137	066-865	12K R158,170,245		3	3	3	3	3	3	3	3	3	3		
138	066-928	2.4K R31,86,142		-	-	-	3	3	3	3	3	3	3		
139	066-873	20K R30,123		2	2	2	2	2	2	2	2	2	2		
140	066-928	2.4K R31,54,86,142		4	4	-	-	-	-	-	-	-	-		
141	066-938	47 OHM R7,9,25,28,29,32-35,40,41,51,58,70,74,76,82,84,85,89,109,110,112,114,121,126,128,130,135,136,138,140,143,145,149,157,163,166,172,196,201,205,207,215,216,221,238,249,253,254,259,279,281,283,286,289,290,313,316,317,73,319,320		63	-	-	-	-	-	-	-	-	-		
143	066-984	160 OHM R19		1	1	-	-	-	-	-	-	-	-		
144	066-985	62 OHM R17,60		2	2	2	2	2	2	2	2	2	2		
145	066-912	82K R250		1	1	-	-	-	-	-	-	-	-		
146	066-984	160 OHMS R19,21		-	-	2	-	-	-	-	-	-	-		
147	076-003	56 OHM R38,57,80		3	3	-	-	-	-	-	-	-	-		
148	076-003	56 OHM R38,80		-	-	2	2	2	2	2	2	2	2		
149	076-015	3.3MEG R307		1	1	1	1	1	1	1	1	1	1		
150	076-028	5.1 OHM R8,12,24,154		4	4	-	-	-	-	-	-	-	-		
151	076-045	75 OHM R4,63,124,129,200		5	5	5	5	5	5	-	-	-	-		
152	076-046	RESISTOR, C.F., 36K, 1/4W, 5% R102		1	1	1	1	1	1	1	1	1	1		
153	066-938	RESISTOR, C.F., 47 OHM, 1/4W, 5% R9,25,28,29,32-35,40,41,51,58,70,73,74,76,82,84,85,89,109,110,112,114,121,126,128,130,135,136,138,140,143,145,149,157,163,166,172,196,201,205,207,215,216,221,238,249,253,254,259,279,281,283,286,289,290,313,316,317,73,319,320		-	62	62	62	62	62	62	62	62	62	-	
154															
155															
156															
157	062-625	RESISTOR, M.F., 1.21K, 1/4W, 1% R223		1	1	1	1	1	1	1	1	1	1		
158	062-643	2K R115		1	1	1	1	1	1	1	1	1	1		
159	062-836	75 OHM R5,87,152		3	3	3	3	3	3	3	3	3	3		
160	062-847	100 OHM R75		1	1	1	1	1	1	1	1	1	1		
161	062-851	RESISTOR, M.F., 113 OHM, 1/4W, 1% R20		1	1	1	1	1	1	1	1	1	1		

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405134	SHEET 5	REV ✓						
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER										
				-01	-02	-03	-04	-05	-06	-07	-08	-09	-10	
162	062-856	RESISTOR, M.F. 124 OHM, 1/4W, 1%	R204,210	2	2	2	2	2	2	2	2	2	2	2
163	062-874	200 OHM	R15	1	1	1	1	1		1			1	1
164	062-884	301 OHM	R55,56,181	3	3	-	-	-	-	-	-	-	-	-
165	062-894	402 OHM	R182,183	2	2	2	2	2	2	2	2	2	2	2
166	062-915	732 OHM	R22,148	2	2	2	2	2	2	2	2	2	2	2
167	062-941	2.21 K	R243	1	1	1	1	1		1			1	1
168	062-945	2.43 K	R88	1	1	1	1	1		1			1	-
169	062-949	2.67 K	R187,242	2	2	2	2	2	2	2	2	2	2	2
170	062-884	301 OHMS	R181	-	-	1	1	1		1			1	1
171	062-951	2.8K	R193	1	1	1	1	1		1			1	1
172	062-962	4.02K	R294	1	1	1	1	1		1			1	1
173	066-784	30.9K	R222	1	1	1	1	1		1			1	1
174	062-968	4.99K	R159	1	1	1	1	1		1			1	1
175	062-970	5.23K	R113	1	1	1	1	1		1			1	1
176	062-983	10 K	R111,160,161,203,209	5	5	5	5	5	5	5	5	5	5	5
177	062-991	14.7K	R293	1	1	1	1	1		1			1	1
178	062-952	2.87K	R265	1	1	1	1	1		1			1	-
179	066-063	2.61K	R261	1	1	1	1	1		1			1	1
180	066-004	24.3K	R246	1	1	1	1	1		1			1	1
181	062-908	604 OHMS	R55,56	-	-	2	2	2	2	2	2	2	2	2
182	066-191	205 OHM	R117	1	1	1	1	1		1			1	1
183	066-072	187 OHMS,	R21			-	1	1		1			1	1
184	062-996	17.4K	R262,288	2	2	2	2	2	2	2	2	2	2	2
185	062-684	RESISTOR, M.F. 243 OHM, 1/4W, 1%	R48,49	2	2	2	2	2	2	2	2	2	2	2
186	062-559	RESISTOR, M.F., 21 K, 1/4W, 1%	R263	1	1	1	1	1		1			1	1
187	062-798	RESISTOR, M.F., 56.2K, 1/4W, 1%	R324	-	-	-	-	-		1			1	1
188	062-847	RESISTOR, M.F. 100 OHMS, 1/4W ± 1%,	R75,135										2	2
189	058-997	RESISTOR, VAR, CERMET, 5K, 1/2W, 20%	R239	1	1	1	1	1		1			1	1
190	058-998	10K,	R244	1	1	1	1	1		1			1	1
191	058-999	20K	R297	1	1	1	1	1		1			1	1
192	075-002	50K	R295	1	1	1	1	1		1			1	1
193	058-991	RESISTOR, VAR, CERMET, 200 OHM, 1/2W, 20%	R186	1	1	1	1	1		1			1	1
194	062-952	RESISTOR, M.F., 2.87K OHMS, 1/4W, 1%	R99,245											2
195	075-202	RESISTOR, VAR, CONDUCTIVE PLSTC, 220 OHM, 0.1W, 20%	R6	1	1	1	1	1		1			1	1
196	062-956	RESISTOR, M.F., 3.40 K OHMS, 1/4W., ± 1%	R325										1	1
197														
198	068-023	INDUCTOR, FIXED, 47uH, 5%	L4,6,7	3	3	3	3	3	3	3	3	3	3	3
199	068-024	INDUCTOR, FIXED, 470 uH, 5%	L11	1	1	1	1	1		1			1	1
200	068-058	INDUCTOR, FIXED, 33 uH, 5%	L5	1	1	1	1	1		1			1	1
201														
202	541-973	INDUCTOR, FIXED, 1 uH, 5%	L10	1	1	1	1	1		1			1	1
203	066-938	RESISTOR, C.F., 470 OHMS, 1/4W, ± 5%	R9,25,28,29,32-35,40,41,51,58,70,73,74,76,82,R2,85,89,109,110,112,114,121,126,128,130,136,138,140,143,145,149,157,163,166,172,196,201,205,207,215,216,221,239,249,253,254,259,279,281,283,286,289,290,313,316,										61	61
204														
205														
206		317,319,320	215,216,221,239,249,253,254,259,279,281,283,286,289,290,313,316,											

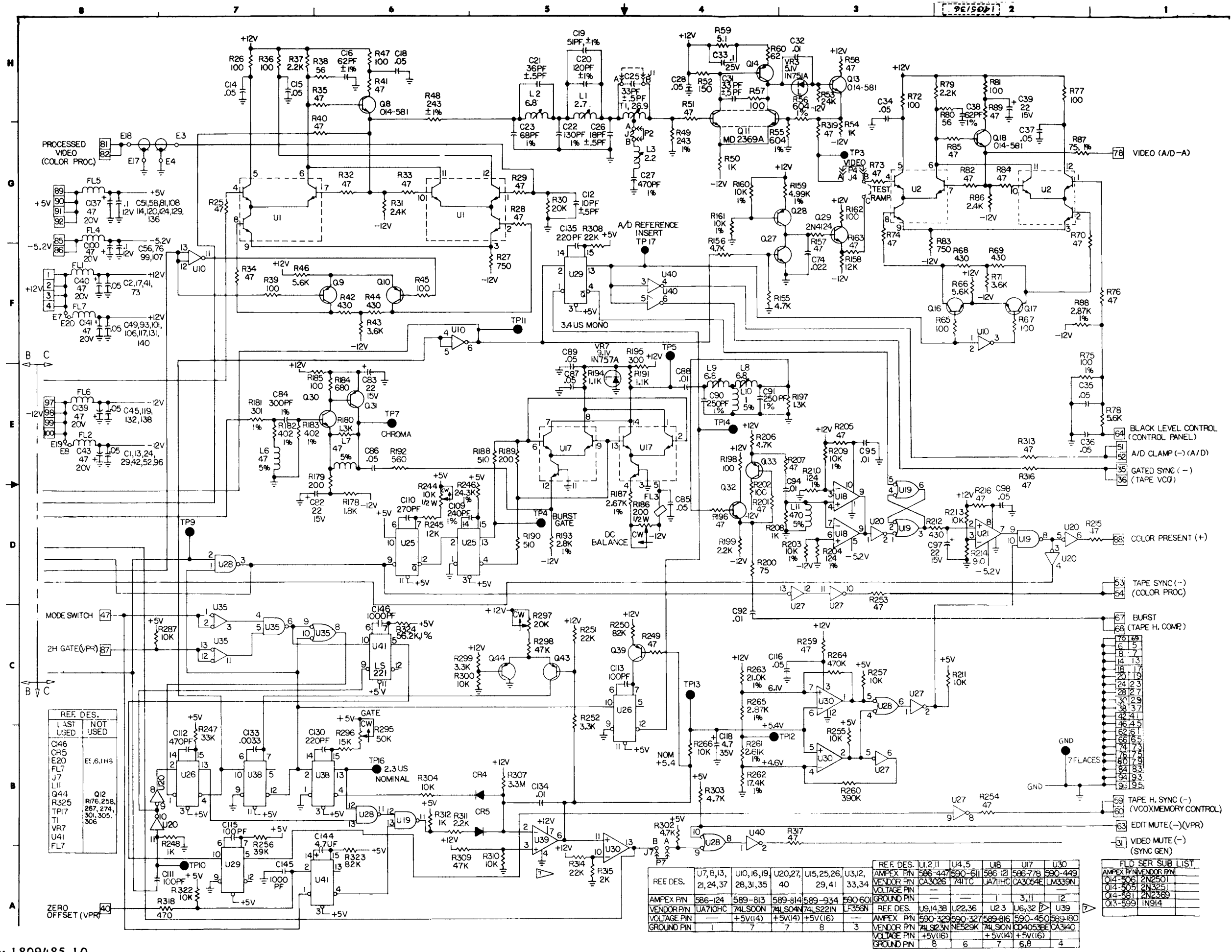
AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405134	SHEET										REV V
ITEM NO.	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER												
					-01	-02	-03	-04	-05	-06	-07	-08	-09	-10			
207	586-292		INTEGRATED CIRCUIT, 711HC U18		1	1	1	1	1	1	1	1	1	1			
208	586-124		710HC U7,8,13,21,24,37		6	6	6	6	6	6	6	6	6	6			
209	586-447		CA 3026 U1,2,11		3	3	3	3	3	3	3	3	3	3			
210	590-611		741TC PRESTRESSED U4,5		2	2	2	2	2	2	2	2	2	2			
211	586-778		CA 3054E U17		1	1	1	1	1	1	1	1	1	1			
212	590-449		LM339N PRESTRESSED U30		1	1	1	1	1	1	1	1	1	1			
213	590-327		NE529K PRESTRESSED U22,36		2	2	2	2	2	2	2	2	2	2			
214	589-816		SN74LS10N, PRESTRESSED U23		1	1	1	1	1	1	1	1	1	1			
215	589-813		SN74LS00N, PRESTRESSED U10,16,19,28,31,35		6	6	6	6	6	6	6	6	6	6			
216	589-814		SN74LS04N, PRESTRESSED U20,27,40		3	3	3	3	3	3	3	3	3	3			
217	590-329		SN74LS123N, PRESTRESSED U9,14,38		3	3	3	3	3	3	3	3	3	3			
218	589-934		SN74LS221N, PRESTRESSED U15,25,26,29		4	4	4	-	-	-	-	-	-	-			
219	590-450		CD4053BE PRESTRESSED U6,32		2	2	2	2	2	2	2	2	2	2			
220	589-934		SN74LS221N, PRESTRESSED U15,25,26,29,41					5	5	5	5	5	5	5			
221	590-601		INTEGRATED CIRCUIT, LF356N PRESTRESSED U3,12,33,34		4	4	4	4	4	4	4	4	4	4			
222	589-180		INTEGRATED CIRCUIT, CA3140 U39		1	1	1	1	1	1	1	1	1	1			
223																	
224	014-505		TRANSISTOR, CD445 (2N3251) Q2,5-7,9,10,14-17,19,22,25,26,28,31,33,34,37,39,43,44		22	22	22	22	22	22	22	22	22	22			
225																	
226	014-506		TRANSISTOR, CD446 (2N4501) Q21,24,27,30,32,35,36,38,40,41,42		11	11	11	11	11	11	11	11	11	11			
227	014-581		TRANSISTOR, CD6150, 2N2369A Q3,4,8,11-13,18,23		8	8	-	-	-	-	-	-	-	-			
228	014-581		TRANSISTOR, CD6150, (2N2369A) Q3,4,8,13,18,23		-	-	6	6	6	6	6	6	6	6			
229	580-133		TRANSISTOR, FET, (2N4093) Q20		1	1	1	1	1	1	1	1	1	1			
230	580-226		TRANSISTOR, (2N4124) Q29		1	1	1	1	1	1	1	1	1	1			
231	580-471		TRANSISTOR, FET, (2N5484) Q1		1	1	1	1	1	1	1	1	1	1			
232	014-852		TRANSISTOR, DUAL, (MD2369A) Q11		-	-	1	1	1	1	1	1	1	1			
233																	
234																	
235	280-130		MTG. PAD, TRANSISTOR, TO-18 REF: NOT USED ON Q1,29		42	42	42	42	42	42	42	42	42	42			
236																	
237	143-981		CONNECTOR, JACK, PC TIP REF: J1-7		15	15	5	15	5	15	15	15	15	15			
238	602-044		PLUG, SHORTING, RED P1-7		7	7	7	7	7	7	7	7	7	7			
239	1R7-259		TERMINAL, TEST POINT TPI-17		17	17	7	17	7	17	17	17	17	17			
240																	
241																	
242																	
243	302-395		STRAP, CABLE		4	4	4	4	4	4	4	4	4	4			
244			WIRE, INSULATED, #22 AWG		A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R			
245	616-569		CABLE, COAX, 75 OHM		A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R			
246																	
247																	
248	075-172		BRACKET REF: R6		1	1	1	1	1	1	1	1	1	1			
249	230-033		KNOB REF: R6		1	1	1	1	1	1	1	1	1	1			
250																	
251	471-062		SCREW, PAN HD, XREC, 4-40 X .375 LG		1	1	1	1	1	1	1	1	1	1			



Assembly No. 1405134-10V. Video Input PWA, A3

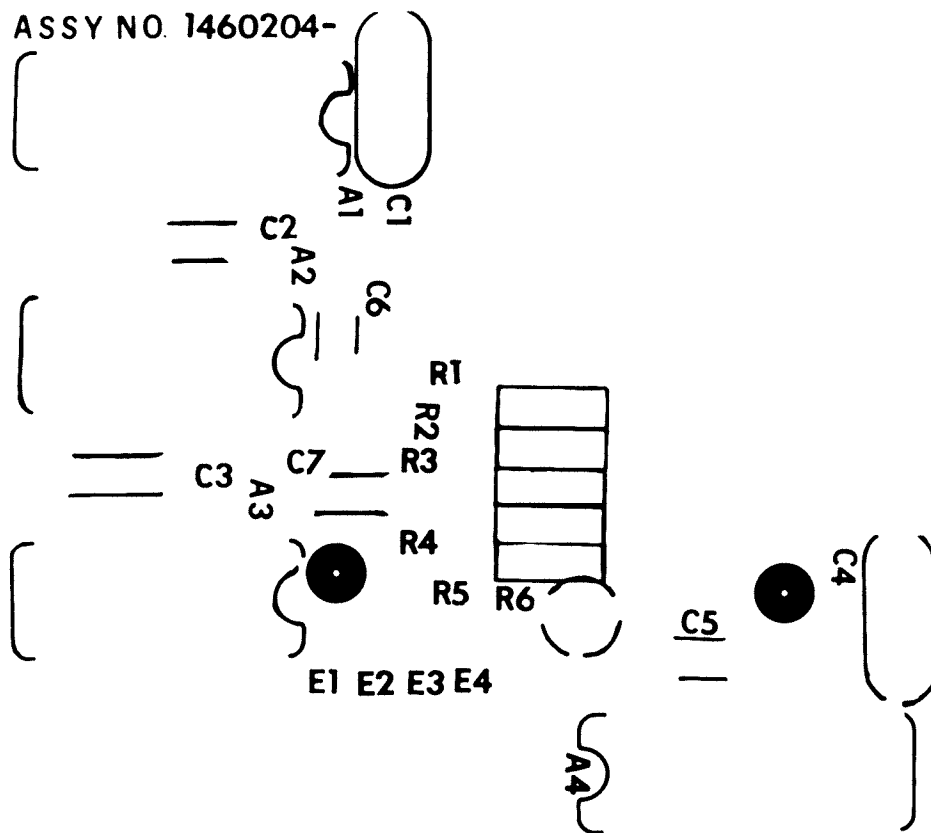


Schematic No. 1405136L.
Video Input PWA, A3
(Sheet 1 of 2)

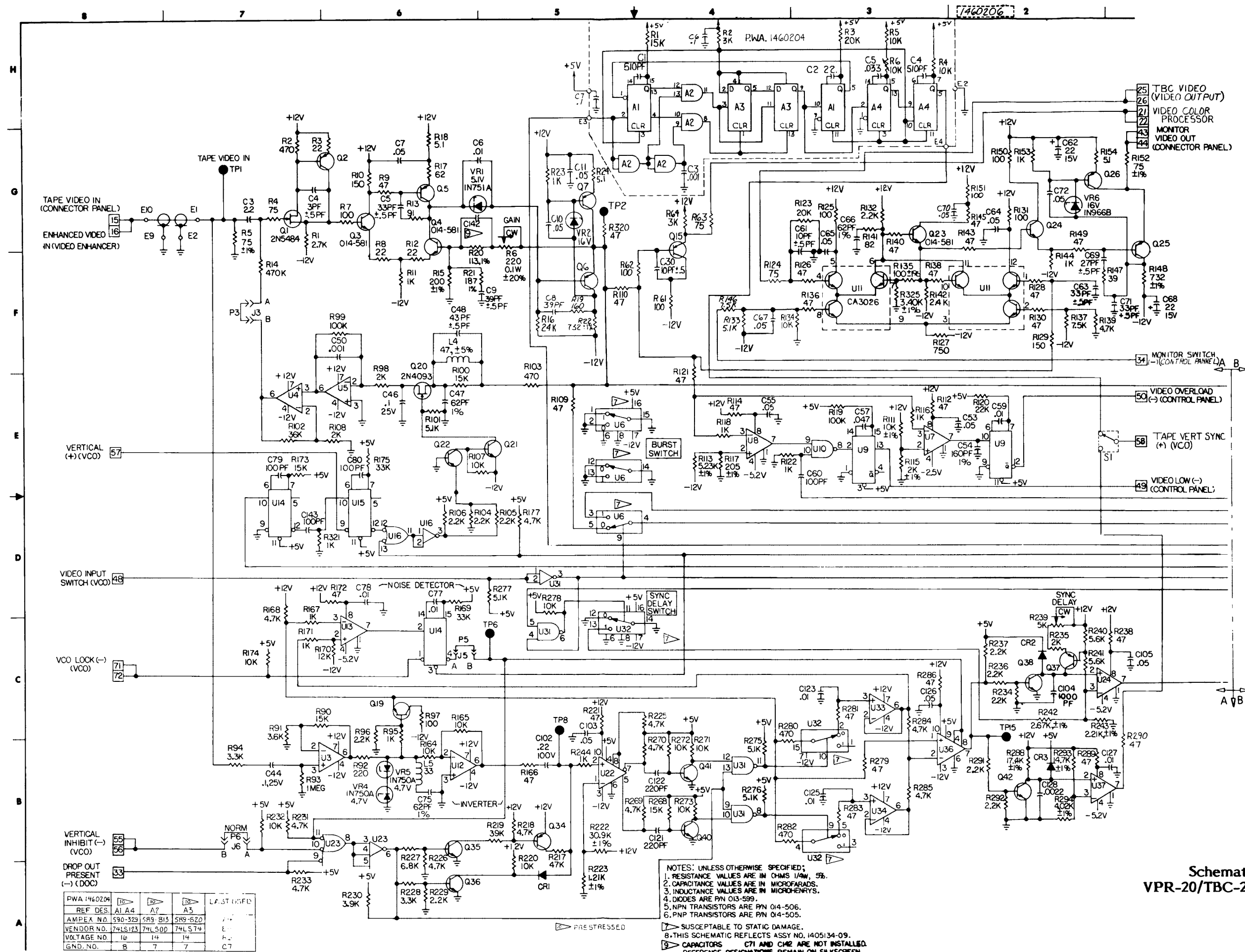


Schematic No. 1405136L.
Video Input PWA, A3
(Sheet 2 of 2)

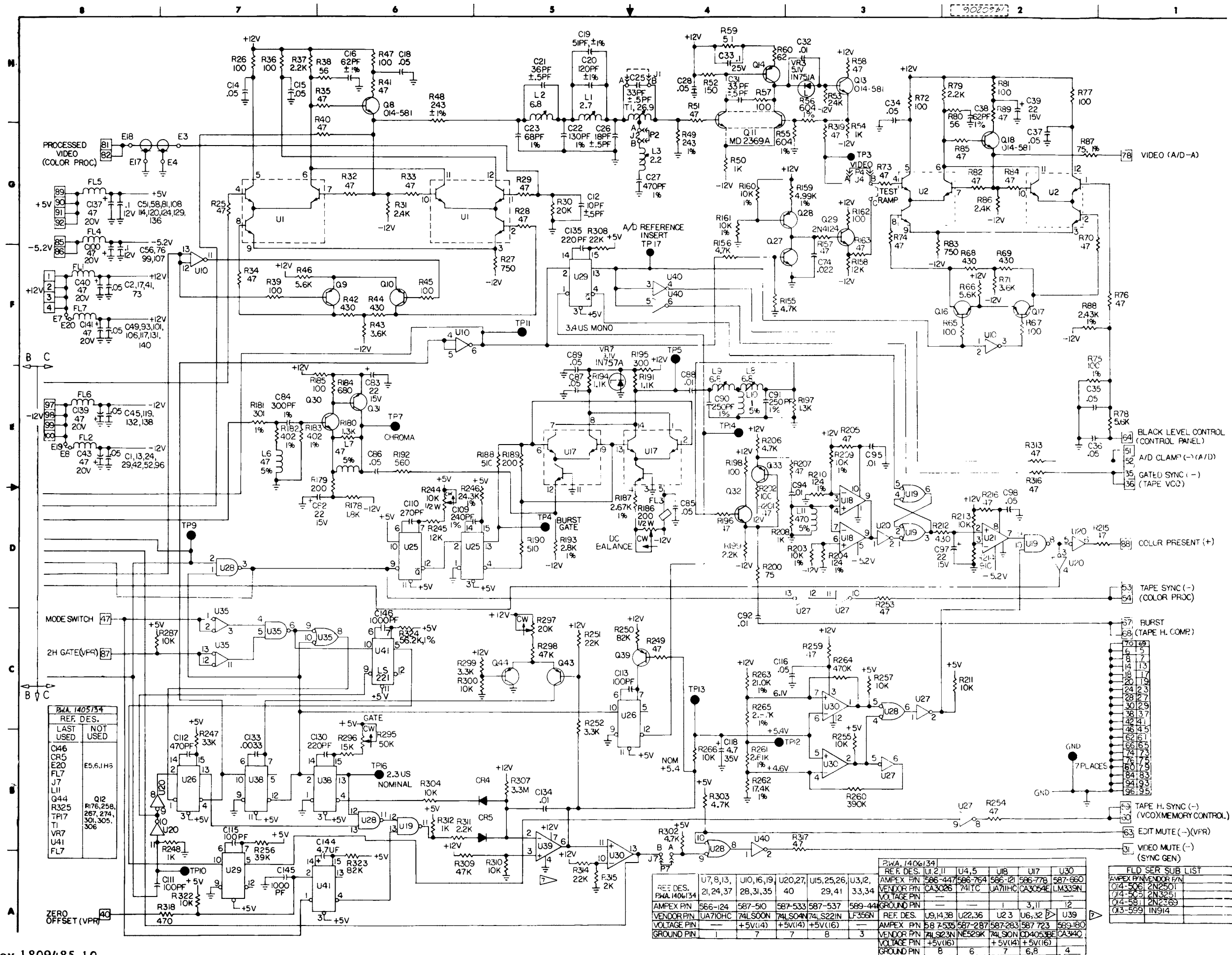
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


Assembly No. 1460204-02D. VPR-20/TBC-2B Interface PWA



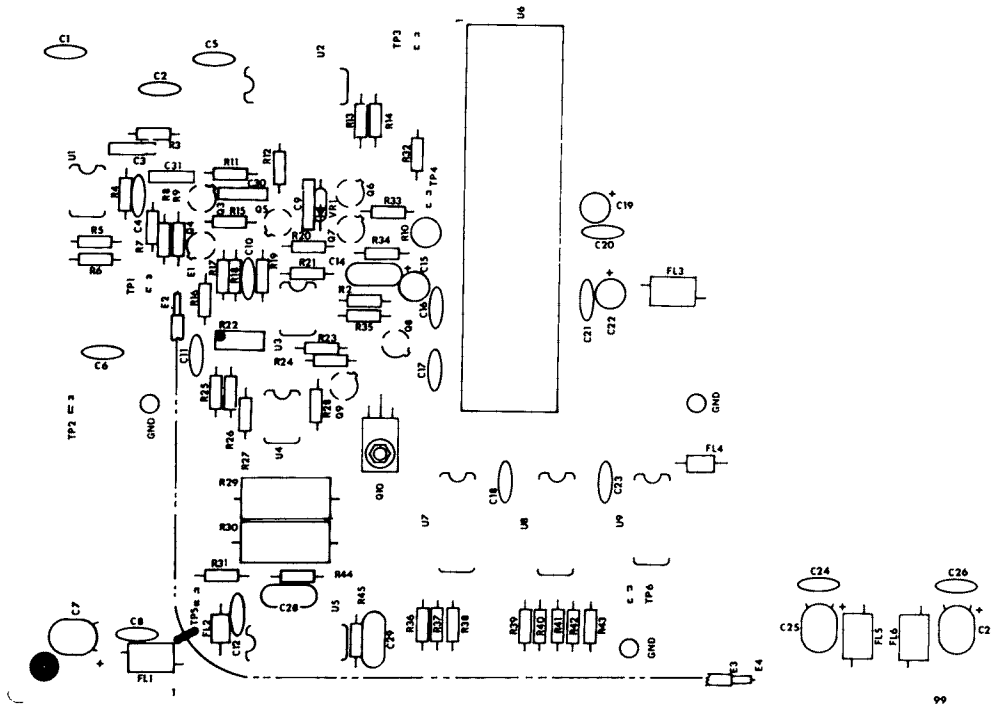
Schematic No. 1460206B.
VPR-20/TBC-2B Interface PWA
(Sheet 1 of 2)



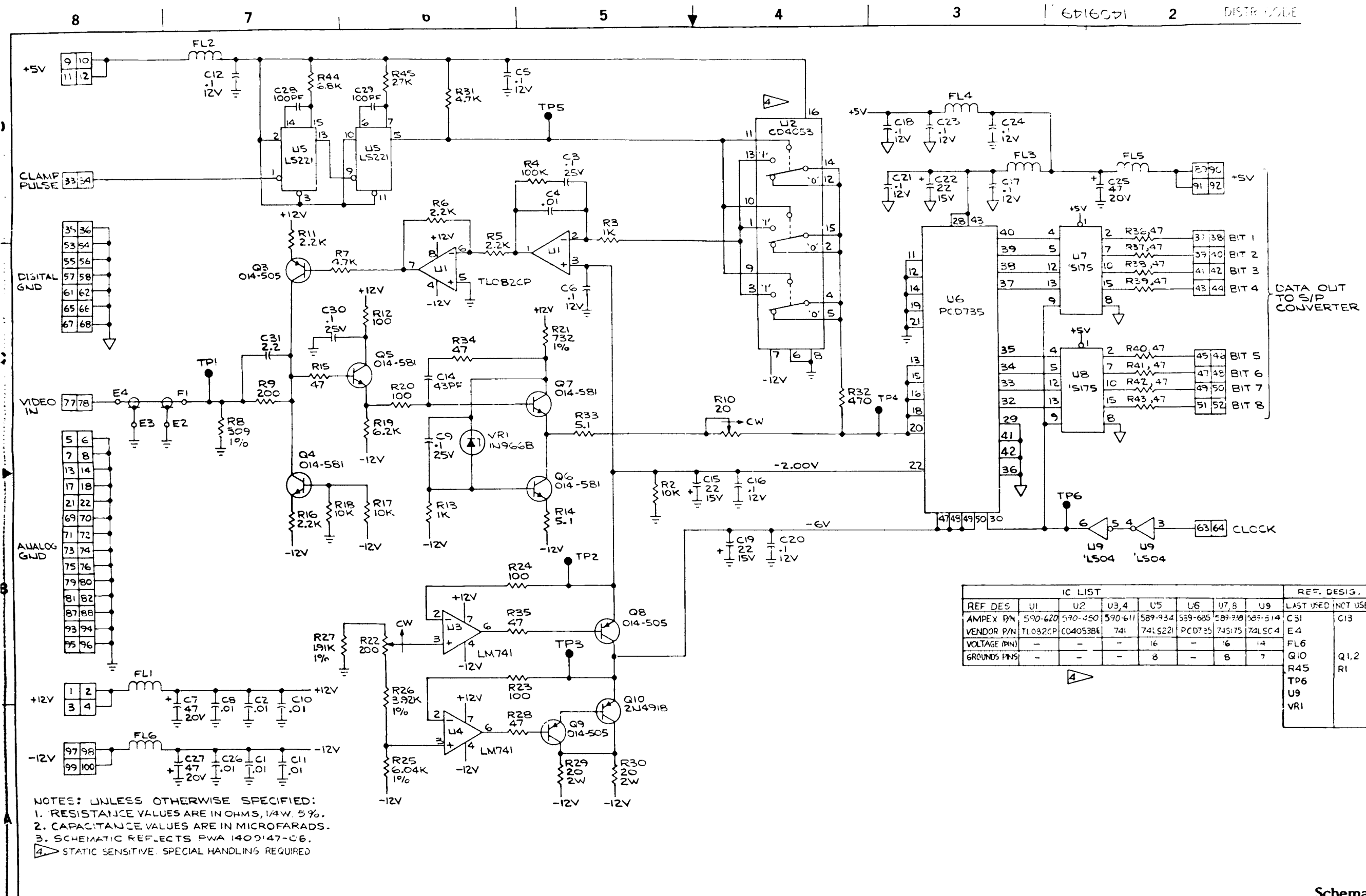
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01	-02								
1													
2	1409149	SCHEMATIC	(E)	H									
3													
4													
5	1402331-AZ	LABEL, MODULE		1									
6	1402332-01	EXTRACTOR ARM		1									
7	1402333-AA	SHIELD		1									
8													
9													
10	1374108-01	INDUCTOR, FILTER	FL2,4	2	2								
11													
12													
13													
14													
15	064-116	CAPACITOR, CERAMIC DISC., .01uF, 50V, +80%-20%	C1,2,4,8,10,11,26	7	7								
16	064-492	CAPACITOR, CERAMIC DISC., .1uF, 12V, +80%-20%	C5,6,12,16-18,20,21,23,24	10	10								
17													
18													
19	030-095	CAPACITOR, CERAMIC, MONO, .1uF, 25V, 20%	C3,9,30	3	3								
20	064-316	CAPACITOR, CERAMIC, MONO, 2.2uF, 50V, 20%	C31	1	1								
21													
22													
23	037-892	CAPACITOR, TANT, 47uF, 20V, $\pm 20\%$	C7,25,27	3	3								
24	037-954	CAPACITOR, TANT, 22uF, 15V, $\pm 20\%$	C15,19,22	3	3								
25													
26													
27	034-177	CAPACITOR, MICA, 100pF, 500V, $\pm 5\%$	C28,29	2	2								
28	034-969	CAPACITOR, MICA, 43pF, 500V, $\pm 5\%$	C14	1	1								
29													
30	051-770	FERRITE CHOKE	FL1,3,5,6	4	4								
31													
32	013-830	DIODE, ZENER, 1N966B, 16V, 4W	VR1	1	1								
33													
34													
35													
36	590-450	I.C., CMOS, CD4053BE, PRESTRESSED	 U2	1	1								
37	589-938	I.C., DIGITAL, TTL, 74S175, PRESTRESSED	U7,8	2	2								

AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1409108	SHEET 2 OF 4		REV H
ITEM NO.	PART NUMBER	DESCRIPTION			REF DESIG	QTY REQD PER DASH NUMBER			
						-01	-02		
38	589-814	I.C., DIGITAL, TTL, 74LS04, PRESTRESSED			U9	1	1		
39	589-934	I.C., DIGITAL, TTL, 74LS22, PRESTRESSED			U5	1	1		
40	590-611	I.C., LINEAR, NA74TC, PRESTRESSED			U3,4	2	2		
41	590-602	I.C., LINEAR, TL082cp, PRESTRESSED			U1	1	1		
42									
43									
44	589-685	I.C., A/D CONVERTER, PCD735			U6	1	1		
45									
46	582-195	SOCKET, I.C., 64 PIN			REF: U6	1	1		
47									
48	062-885	RESISTOR, FIXED, M.F., 309 OHMS, 1/4W, $\pm 1\%$			R8	1	1		
49	066-160	6.04K OHMS, 1/4W, $\pm 1\%$			R25	1	1		
50	062-915	732 OHMS, 1/4W, $\pm 1\%$			R21	1	1		
51	062-961	3.92K OHMS, 1/4W, $\pm 1\%$			R26	1	1		
52	066-454	RESISTOR, FIXED, M.F., 1.91K OHMS, 1/4W, $\pm 1\%$			R27	1	1		
53									
54									
55	066-662	RESISTOR, FIXED, C.F., 200 OHMS, 1/4W, $\pm 5\%$			R5	1	1		
56	066-665	1K OHMS, 1/4W, $\pm 5\%$			R3,13	2	2		
57	066-668	4.7K OHMS, 1/4W, $\pm 5\%$			R7,31	2	2		
58	066-689	2.2K OHMS, 1/4W, $\pm 5\%$			R5,6,11,16	4	4		
59	066-812	100 OHMS, 1/4W, $\pm 5\%$			R12,20,23,24	4	4		
60									
61	066-843	6.2K OHMS, 1/4W, $\pm 5\%$			R19	1	1		
62	066-849	100K OHMS, 1/4W, $\pm 5\%$			R4	1	1		
63	066-866	27K OHMS, 1/4W, $\pm 5\%$			R45	1	1		
64	066-818	470 OHMS, 1/4W, $\pm 5\%$			R32	1	1		
65	066-938	47 OHMS, 1/4W, $\pm 5\%$			R15, 28,34-43	12	12		
66	066-829	6.8K OHMS, 1/4W, $\pm 5\%$			R44	1	1		
67									
68	076-028	5.1 OHMS, 1/4W, $\pm 5\%$			R14,33	2	2		
69									
70	066-830	10K OHMS, 1/4W, 5%			R2,17,18	3	3		
71									
72									
73	041-266	RESISTOR, FIXED, C.F., 20 OHMS, 2W $\pm 5\%$			R29,30	2	2		
74									
75									
76	058-452	RESISTOR, VARIABLE, CERMET, 200 OHMS			R22	1	1		
77	058-584	RESISTOR, VARIABLE, CERMET, 20 OHMS, 1/2W			R10	1	1		
78									
79									
80	014-505	TRANSISTOR, CD445 2N3251			Q3,8,9	3	3		
81									
82									

A/D CONVERTER
 ASSY NO.
 SCHEM NO. 1409149
 AW ISSUE **H**



Assembly No. 1409108-02H. A/D Converter PWA, A4



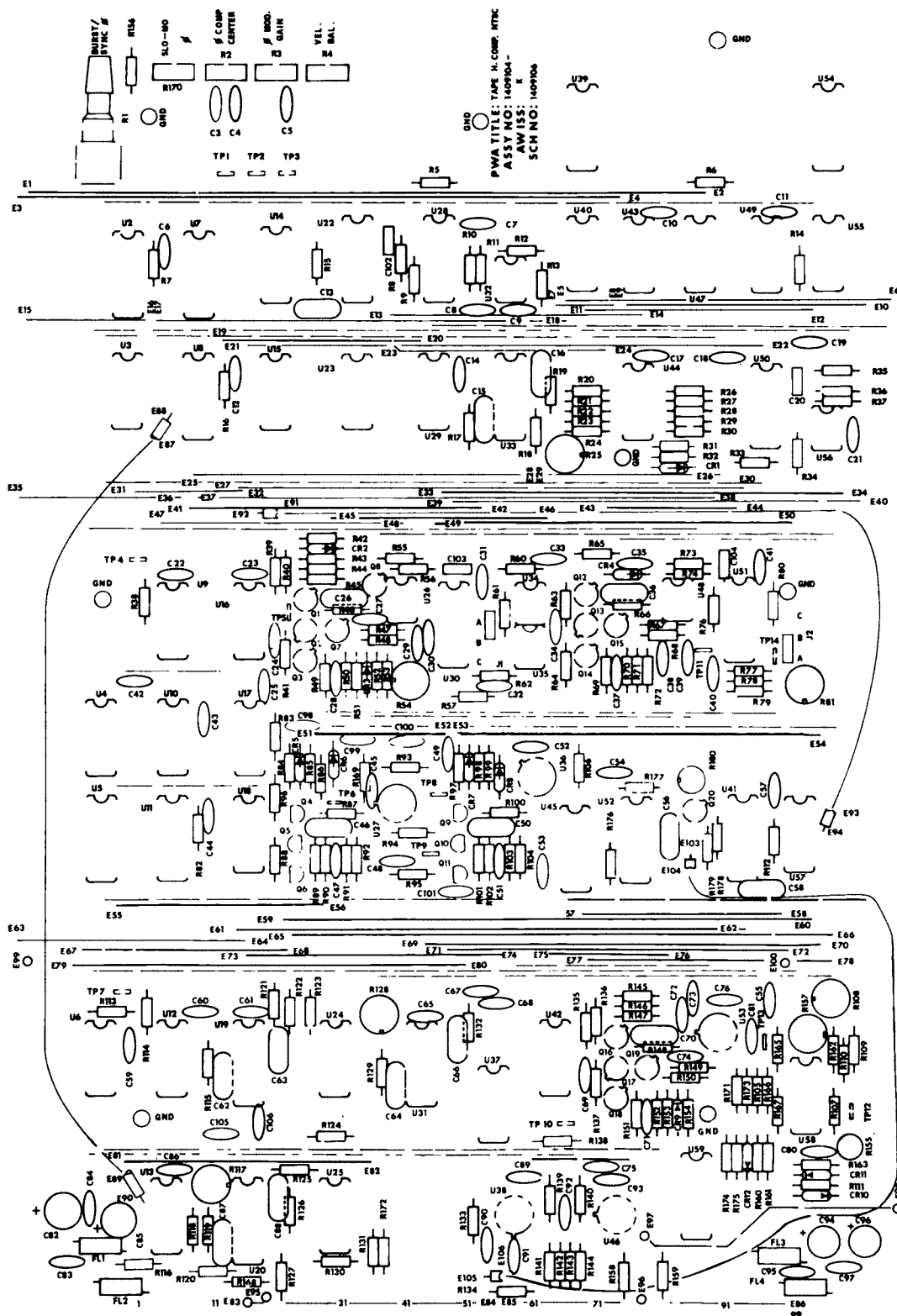
Schematic No. 1409149H.
A/D Converter PWA, A4

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER										
				-09	-10	-11								
1														
2														
3	1409106	SCHEMATIC		J	L	P								
4														
5	051-770	INDUCTOR, FILTER	FL1-4	4	4	4								
6	1402332-01	EXTRACTOR ARM		1	1	1								
7	1402333-AA	SHIELD		1	1	1								
8	1402331-BA	LABEL MODULE		1	1	1								
9														
10	064-116	CAP., CER., DISC., .01uF, 50V, $\pm 80/20\%$	C24,34,35,37,69,80 81,91,92	9	9	9								
11	064-116	CAP., CER., DISC., .01uF, 50V, $\pm 80/20\%$	C24,34,35,37,69,80 91,92	-	-	-								
12	064-492	CAP., CER., DISC., .1uF, 12V, $\pm 80/20\%$	C6,7,10,11,12,14,18 22,23,25,31,41-44, 52-54,57,59,60,61,65,68,73,84, 86,90,93,95,100,106	-	-	-								
13														
14	064-569	CAP., CER., DISC., .05uF, 50V, $\pm 80/20\%$	C2-5,8,9,17,19,21,27 -30,32,33,38,39,40, 45,47,48,49,51,67,71,72,74-77, 79,83,89,97,98,99,101,105	-	-	-								
15														
16	064-569	CAP., CER., DISC., .05uF, 50V, $\pm 80/20\%$	C2-5,8,9,17,19,21,27 -30,32,33,38,39,40, 45,47,48,49,51,55,67,71,72,74- 77,79,83,89,97,98,99,101,105	-	-	-								
17														
18	064-314	CAP., CER., MONO 1uF, 50V, 20% C104		1	1	1								
19														
20														
21	037-892	CAP., TANT. 47uF, 20V, $\pm 20\%$	C82,85,94,96	4	4	4								
22														
23														
24	069-090	CAPACITOR, MYLAR, .001uF, 50V, $\pm 5\%$	C103	1	1	1								
25	069-103	CAPACITOR, MYLAR, .0047uF, 50V, $\pm 5\%$	C20	1	1	1								
26	069-109	CAPACITOR, MYLAR, .0022uF, 50V, $\pm 5\%$	C102	1	1	1								
27														
28	034-177	CAPACITOR, MICA, 100pF, 500V, 5%	C16	1	1	1								
29	034-961	120pF, 5%	C87	1	1	1								
30	034-945	12pF, 5%	C56	1	1	1								
31	034-219	120pF, 1%	C26,70	2	2	2								
32	034-220	150pF, 1%	C36	1	1	1								
33	034-222	100pF, 1%	C63,88	2	2	2								
34	034-240	220pF, 5%	C13	1	1	1								
35	034-269	22pF, 5%	C62,64	2	2	2								
36														
37	056-601	CAPACITOR, MICA, 47pF, 500V, $\pm .5\%$	C46,50	2	2	2								

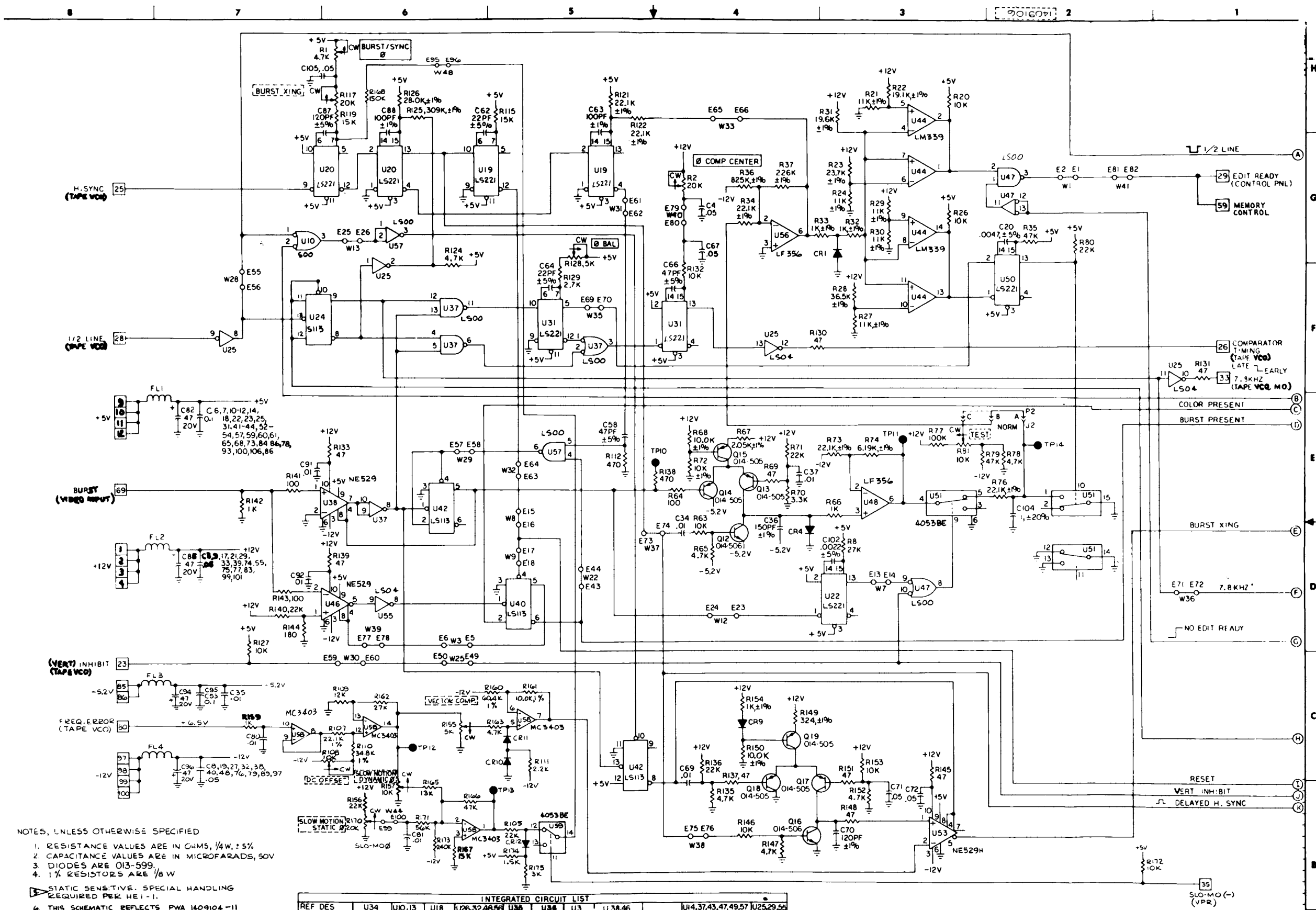
AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1409104	SHEET 2	REV V												
ITEM NO	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER																
				09	10	11	12	13	14	15	16	17	18							
38	034-181	CAPACITOR, MICA, 47pF, 5%, 500V	C15, 58 66	3	3	3														
39	034-950	CAPACITOR, MICA, 1000pF, 5%, 100V	C16	-	-	-														
40	013-599	DIODE, SWITCHING, CD458	CR1-5, 7, 9-12	10	10	10														
41	013-599	DIODE, SWITCHING, CD458	CR1-5, 7, 9-11	-	-	-														
42	581-079	DIODE, HOT CARRIER, HP5082-2810	CR6, 8	2	2	2														
43	587-131	INTERGRATED CITCUIT, MC10124	U45	1	1	1														
44	590-568	INTEGRATED CIRCUIT, SN74S113	U6, 9, 12, 17, 24	5	5	5														
45	590-611	INTEGRATED CIRCUIT, LM741TC,	U34	1	1	1														
46	589-837	SN74S00	U10, 13	2	2	2														
47	589-840	SN74S10	U18	1	1	1														
48	589-846	SN74S74	U24	-	-	-														
49	589-838	SN74S04	U41	-	-	-														
50	590-464	MC10125	U41	1	1	1														
51	589-816	SN74LS10	U3	1	1	1														
52	590-327	NE529H	U38, 46	2	2	2														
53	590-566	MC10135	U52	1	1	1														
54	589-813	SN74LS00	U14, 37, 43, 47, 49, 57	6	6	6														
55	589-814	SN74LS04	U25, 29, 55	3	3	3														
56	589-832	SN74LS193	U7	1	1	1														
57	589-934	SN74LS221	U19, 20, 22, 31, 33, 50	6	6	6														
58	590-568	SN74S113	U6, 9, 12, 17	-	-	-														
59	590-449	LM339	U44	1	1	1														
60	587-682	MC3403	U58	1	1	1														
61	590-450	CD4053BE	U28, 30, 51, 59	4	4	4														
62	589-831	SN74LS175	U5	1	1	1														
63	589-932	SN74LS113	U8, 15, 16, 23, 40, 42	6	6	6														
64	590-604	SN74S163	U2, 8, 11	3	3	3														
65	590-602	TL082CP	U35	1	1	1														
66	590-601	LF356	U26, 32, 48, 56	4	4	4														
67	589-555	INTEGRATED CIRCUIT, AM686HC	U36	1	1	1														
68	589-802	INTEGRATED CIRCUIT, NE529H (RESTRICTED VENDOR)	U27, 53	2	2	2														
69	066-820	RESISTOR, C.F., 750 OHMS, 5%, 1/4W	R178	1	1	1														
70	066-823	RESISTOR C.F., 1.1K OHMS, 5%, 1/4W	R177	-	-	-														
71	066-665	RESISTOR, C.F., 1K OHM, 5%, 1/4W	R7, 15, 38, 66, 82, 92, 96, 103, 107, 114, 116, 123, 142, 159	-	-	-														
72	066-666	2.7K	R129	1	1	1														
73	066-668	4.7K	R12, 16, 18, 39, 45, 50, 62, 65, 78, 83, 93, 113, 124, 135, 147, 152, 163	17	17	17														
74	066-669	8.2K	R91, 104	2	2	2														
75	066-689	2.2K	R111, R118	2	2	2														
76	066-712	22K	R40, 71, 80, 136, 140	-	-	-														
77	066-717	47K	R35, 79	-	-	-														
78	066-720	3.3K	R17, 70	2	2	2														
79	066-812	100	R13, 64, 141, 143	4	4	4														
80	066-818	470	R112, 138	-	-	-														
81	066-711	RESISTOR, C.F., 7.5K OHM, 5%, 1/4W	R109	-	-	-														

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1409104	SHEET 3	PFV V
ITEM NO	PART NUMBER	DESCRIPTION			REF DESIG	QTY REQD PER DASH NUMBER		
						09	10	11
82	066-868	RESISTOR, C.F., 120K OHM, 5%, 1/4W			R165,166,168			
83	066-830	10K			R5,6,14,20,26, 44,51,57,61, 63,127,132,146 153,156,162,164,172			
84	066-833	56K			R171		1	1
85	066-847	33K			R19,167			
86	066-849	100K			R77		1	1
87	066-856	15K			R60,115			
88	066-865	12K			R53			
89	066-866	27K			R8,			
90	066-938	47			R41,46,49,69,87,88,89, 94,95,100,101,106,120, 130,131,133,134,137,139, 145,148,151,158,169	24	24	24
91								
92	076-004	180 OHM, 5%, 1/4W			R144	1	1	1
93	066-873	20K OHM, 5%, 1/4 W			R119			
94	066-928	C.F., 2.4K OHM, 5%, 1/4 W			R171			
95	066-958	RESISTOR, C.F., 75K OHM, 5%, 1/4W			R110			
96	041-343	RESISTOR, CARBON, 680 OHM, 5%, 1/2W			R90,102	2	2	2
97	066-974	RESISTOR, C.F., 150K OHM, 5%, 1/4W			R168	1	1	1
98	062-600	RESISTOR, M.F., 11K OHM, 1%, 1/8W			R21,24,27,29, 30	5	5	5
99	062-624	1K			R32,33,52,85, 98,154	6	6	6
100	062-642	6.81K			R84,97	2	2	2
101	062-939	2.05K			R67	1	1	1
102	062-974	6.19K			R74	1	1	1
103	062-983	10.0K			R43,48,68,72, 150,161	6	6	6
104	062-991	14.7K			R9	1	1	1
105	066-003	23.7K			R23	1	1	1
106	066-008	28.0K			R126	1	1	1
107	066-183	60.4K			R10,160	2	2	2
108	066-193	2.15K			R56	1	1	1
109	066-194	324			R47,149	2	2	2
110	066-324	442			R86,99	2	2	2
111	066-512	4.22K			R55	1	1	1
112	066-515	36.5K			R28	1	1	1
113	066-656	30.1K			R11	1	1	1
114	066-710	19.6K			R31	1	1	1
115	066-736	9.53K			R42	1	1	1
116	066-761	19.1K			R22	1	1	1
117	066-764	226K			R37 R34,73,76, 121,122	1	1	1
118	066-925	22.1K						
119	076-366	309K			R125		1	1
120	076-385	RESISTOR, M.F., 825K OHM, 1%, 1/8W			R36		1	1
121	066-525	RESISTOR, M.F., 34.8K OHMS, 1%, 1/8W			R110		1	1
122	066-818	RESISTOR, C.F., 470 OHM, 5%, 1/4W			R112,138,177	3	3	3
123	058-004	RESISTOR, VAR., CERMET, 1K OHM, 20%, 1/2W			R180		1	1
124	044-944	RESISTOR, VAR., CERMET, 5K OHM, ±20%, 1/2W			R155		1	1
125	058-994	RESISTOR, VAR., CERMET, 1K OHM, 20%, 1/2W			R108			

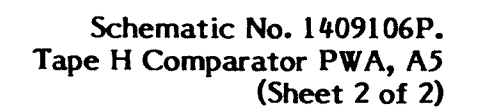
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1409104	REV V									
						SHEET 4										
ITEM NO	PART NUMBER	DESCRIPTION			REF DESIG	QTY REQD PER DASH NUMBER										
						-09	-10	-11								
126	058-995	RESISTOR, VAR, CERMET, 2K OHM, 20%, 1/2W			R25	1	1	1								
127	058-997	RESISTOR, VAR, CERMET, 5K OHM, 20%, 1/2W			R54,128,155	-	-	-								
128	058-998	↑	↑	10K	20%	R81,157	-	-	-							
129	058-999			20K	20%	R117	-	-	1							
130	075-212			2K	10%	SIDE ADJ. R3	1	1	1							
131	075-213			5K	↑	R170	-	-	-							
132	075-214	↓	↓	10K	↓	R4	1	1	1							
133	075-215	RESISTOR, VAR, CERMET, 20K OHM, 10%, 1/2W, SIDE ADJ. R2				-	-	-								
134	075-256	RESISTOR, VAR, PLASTIC, 4.7K OHM, 20%, 1W, SIDE ADJ. R1				1	1	1								
135																
136																
137	014-505	TRANSISTOR, PNP, (CD445) (2H3251)			Q2,3,7,8,13,14,15,17,18,19	10	10	10								
138	014-506	↑	NPN, (CD446) (2N2501)		Q1,12,16	3	-	-								
139	014-581	↑	(2N369A)		Q20	1	1	1								
140	580-226	↓	NPN, (2N4124)		Q4,9	2	2	2								
141	580-912	TRANSISTOR, PNP, (2H5771)			Q5,6,10,11	4	4	4								
142																
143																
144	280-130	PAD, TRANSISTOR MTG, TO-18			REF: Q1,2,3,7,8,12-19	13	13	13								
145	474-300	SCREW, MACH, PAN HD, XREC, ASSD 4-40x.312 LG				7	7	7								
146	143-981	JACK, P. C. TIP			REF: J1,2	6	6	6								
147	143-981	JACK P.C. TIP			REF: J1,2,3,4	-	-	-								
148	602-044	PLUG, SHORTING, RED			P1-4	-	-	-								
149	187-259	TERMINAL, TEST LUG			TP1-14	14	4	14								
150	602-044	PLUG, SHORTING RED			P1,2	2	2	2								
151	1409035-01	BUS BAR .5 IN SPACING				A/R	A/R	AR								
152	302-395	STRAP CABLE				3	3	3								
153	616-569	CABLE, COAX, 75 OHM				A/R	A/R	AR								
154	CD-569	WIRE, INSULATED, STRANDED, 26 AWG				A/R	A/R	AR								
155	075-172	BRACKET			REF R1		1	1								
156	230-033	KNOB			REF R1		1	1								
157	283-105	SPACER, UNTHREADED					1	1								
158	471-062	SCREW, MACH, PAN HD, XREC, 4-40 X .375 LG					1	1								
159	473-325	SCREW, MACH, PAN HD, XREC, ASSD, 4-40 X .312 LG					-	-								
160	501-169	WASHER, PLAIN #4					-	-								
161	502-002	WASHER, LOCK, HELICAL SPRING, #4				1	1	1								
162	066-824	RESISTOR, C.F. 1.5K OHMS, 5%, 1/4W			R174	-	-	-								
163	066-667	RESISTOR, C.F. 3K OHMS, 5%, 1/4W			R175	1	1	1								
164	066-864	RESISTOR, C.F. 13K OHMS, 5% 1/4W			R165	1	1	1								
165	066-850	RESISTOR, C.F. 240K OHMS, 5% 1/4W			R173	1	1	1								
166	066-665	RESISTOR, C.F. 1K OHM, 1/4W, 5% R7,15,38,66,82,92,96,159,103,114,116,123,142,				13	3	13								
167	066-824	RESISTOR, C.F., 1.5K OHMS, 5%, 1/4W R174,176,179				3	3	3								
168	066-712	RESISTOR, C.F. 22K OHMS, 1/4W, 5%, R40,71,80,105,136,140,156				7	7	7								



Assembly No. 1409104-11V. Tape H Comparator PWA, A5



Schematic No. 1409106P.
Tape H Comparator PWA, A5
(Sheet 1 of 2)

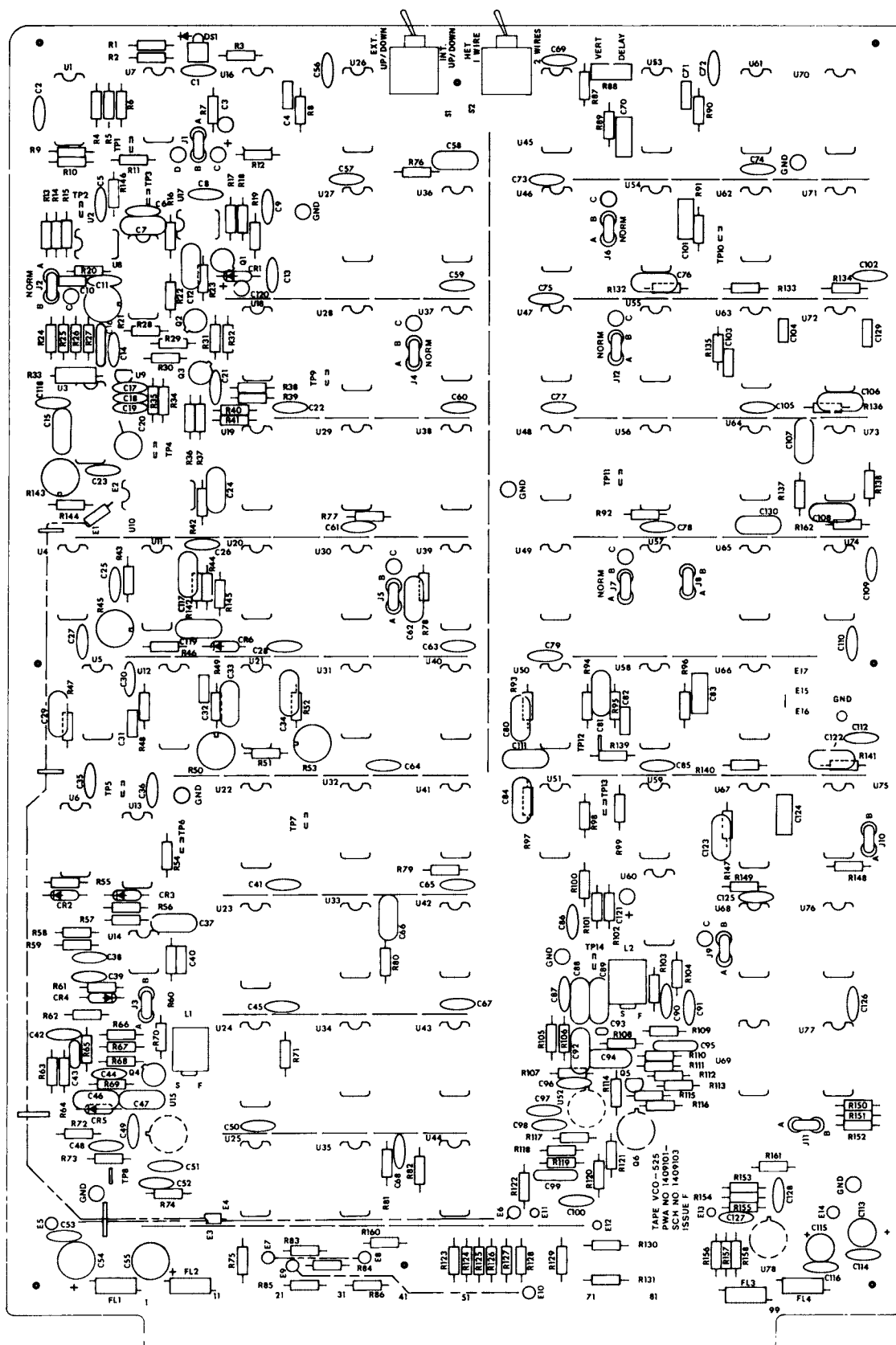


ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER							
				-00	-01	-02	-03	-04	-05	-06	-07
1											
2											
3	1409103	SCHEMATIC		(-)	(-)	(-)	(R)	C	E	G	
4											
5	051-770	INDUCTOR FILTER	FL1-4	4	4	4	4	4	4	4	
6	1402332-01	EXTRACTOR ARM		1	1	1	1	1	1	1	
7	1402333-AA	SHIELD		1	1	1	1	1	1	1	
8	1402331-BB	LABEL, MODULE		1	1	1	1	1	1	1	
9											
10											
11	013-599	DIODE, SWITCHING CD458 (1N454)	CR1,6	2	2	2	2	2	2	2	
12	013-650	DIODE, CD400 (1N27C)	CR4	1	1	1	1	1	1	1	
13	038-243	DIODE, VARRACTOR, (MVI650)	CR5	1	1	1	1	1	1	1	
14	581-079	DIODE, HOT CARRIER, (HP5082-2810)	CR2,3	2	2	2	2	2	2	2	
15	581-522	LED, RED	DS1	1	1	1	1	1	1	1	
16	064-492	CAPACITOR, CER., .1uF 12V. 35,36,38,41,45,50,52,56,57,59,60	C1,6,13,17,18,21-23,25,26,28,30,85,87,90,102,105,109,110,112,114,119,49,96,98,100,118	52	52	52	52	52	52	50	
17		125-128, 61,63-65,67,68,69,72,73-75,77-79									
18	064-116	CAPACITOR, CER., .01uF, 50V, 100,118	C2,5,8,9,11,14,27,39,42,44,48,51,53,86,91,97,116	6	6	6	6	6	6	6	
19	064-569	CAPACITOR, CER., .05uF, 50V		17	17	17	17	17	17	17	
20											
21	064-492	CAPACITOR, CER., .1uF, 12V	C1,6,13,17,18,21-23,25,26,28,30,35,36,38,41,45,50,52,56,57,59,60,61,63-65,67,68,69,72,73-75,77-79,85,87,90,102,105,107,109,110,112,114,126-128	52	-	-	-	-	-	-	
22											
23											
24											
25	064-314	CAPACITOR, CER., MONO, 1uF, 50V, ±20%	C103	1	1	1	1	1	1	1	
26	030-095	CAPACITOR, CER. MONO, .1uF, 25V, 20%	C16,95,99	3	3	3	3	3	3	3	
27	064-307	CAPACITOR, CER. MONO, .22uF, 100V, 20%	C4,10	2	2	2	2	2	2	2	
28	064-307	CAPACITOR, CER., MONO., 1uF, 50V, ± 20%	C103	-	-	-	-	-	-	-	
29	037-892	CAPACITOR, TANT. 47uF, 20V 20%	C54,55,113,115	4	4	4	4	4	4	4	
30	037-954	CAPACITOR, TANT, 22uF, 15V, 20%	C3,120,121	3	3	3	3	3	3	3	
31	034-215	CAPACITOR, MICA, 10PF, 500V, ±.5PF	C92	1	1	1	1	1	1	1	
32	034-177	CAPACITOR, MICA, 100 PF, 500V, ±5%	C24,58,62,66,76,84,106,107,108,111,122	1	-	-	-	-	-	-	
33	034-156	CAPACITOR, MICA, 5 PF, 500V, ±.5PF	C89	1	1	1	1	1	1	1	
34	034-177	↑ 100PF, 500V 5%	C24,58,62,66,76,112,84,106,107,108,111	-	-	-	-	-	-	-	
35	034-181	↓ 47PF, 500V, 5%	C81,117	2	2	2	2	2	2	2	
36	034-184	↓ 68PF, 500V, 5%	C119	1	1	1	1	1	1	1	
37	034-215	CAPACITOR, MICA, 10PF, 500V, ±.5pF	C20,92	2	-	-	-	-	-	-	

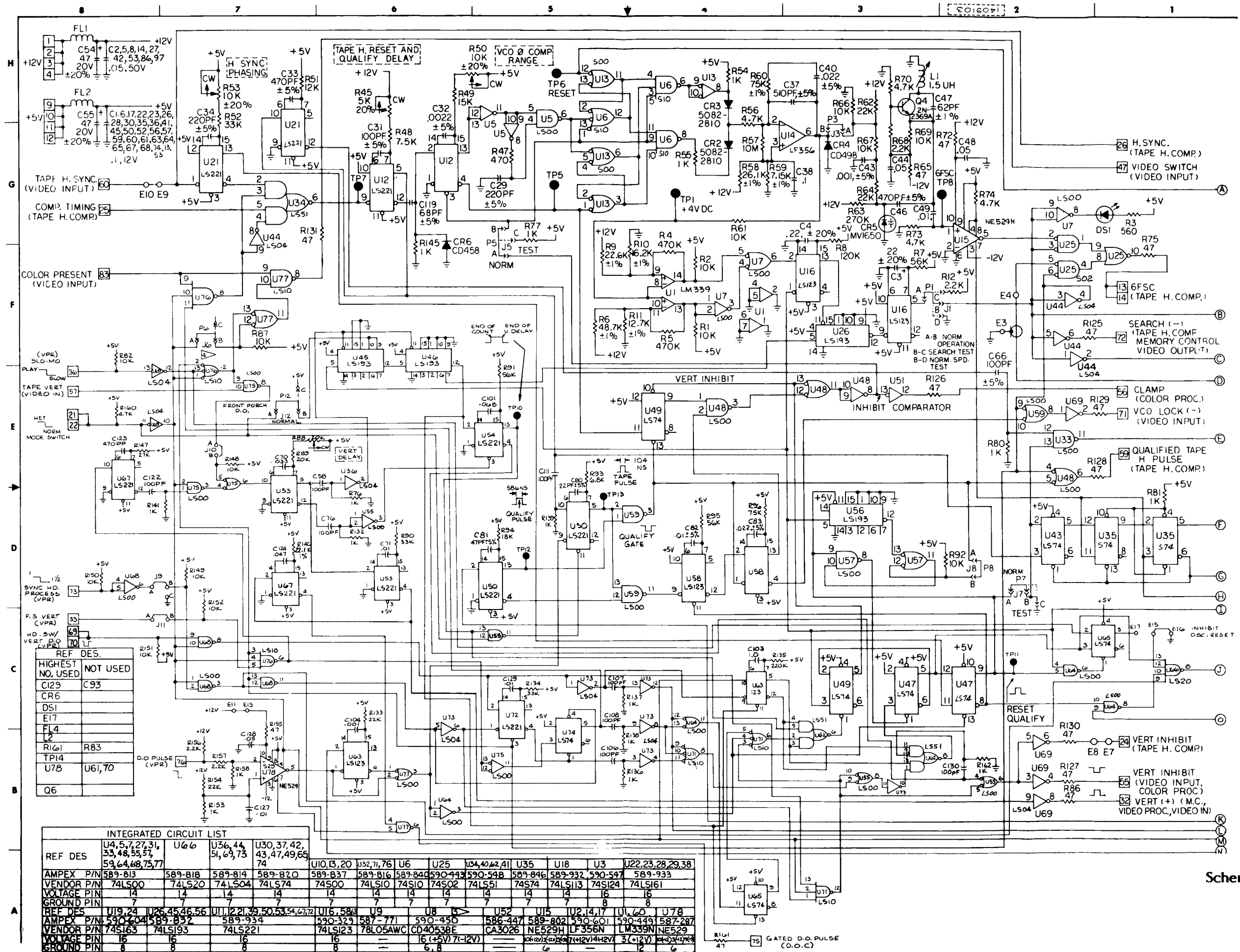
AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-140910	SHEET 2		REV L	
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER						
				-01	-02	-03	-04	-05	-06	-07
38	034-240	CAPACITOR, MICA 220pF, 500V, 5%	C7,29,34	3	3	3	3	3	3	3
39	034-269	22PF, 5%	C80,88	2	2	2	2	2	2	2
40	034-286	200PF 5%	C94	1	1	1	1	1	1	1
41	034-541	62PF 1%	C47	1	1	1	1	1	1	1
42	034-759	15PF, 500V, ±.5pF	C15	1	1	1	1	1	1	1
43	034-932	510PF, 300V, 5%	C37	1	1	1	1	1	1	1
44	056-163	CAPACITOR, MICA 470PF, 500V, 5%	C12,33 46,123	4	4	4	4	4	4	4
45	034-177	CAPCITOR, MICA, 100PF, 500V, ±5%	C24,58,62,66,76,84, 106-108,111,122,130	12	12	12	12	12	12	12
46	038-292	CAPACITOR,VARIABLE, 1-10PF,250V	C20	1	1	1	1	1	1	1
47	064-568	CAPACITOR, CER. MONO., TEMP. COMP, 100pF, 50V, 5%	C31	1	1	1	1	1	1	1
48	069-092	CAPACITOR, POLY, 0.047uF, 50V, ± 5%	C124	1	1	1	1	1	1	1
49	069-090	CAPACITOR, POLY, 0.001uF, 50V, 5%	C43,104	2	2	2	2	2	2	2
50	069-094	.068 uF	C101	1	1	1	1	1	1	1
51	069-095	.033 uF	C70	1	1	1	1	1	1	1
52	069-097	.022 uF	C40,83	2	2	2	2	2	2	2
53	069-100	.01uF	C71,82, 129	3	3	3	3	3	3	3
54	069-109	CAPACITOR, POLY .0022 uF 50V, 5%	C32	1	1	1	1	1	1	1
55	589-818	INTEGRATED CIRCUIT, SN74LS20N	U66	1	1	1	1	1	1	1
56	589-802	INTEGRATED CIRCUIT, SIGNETICS NE529H, (RESTRICTED)	U15	1	1	1	1	1	1	1
57	586-447	INTEGRATED CIRCUIT CA3026	U52	1	1	1	1	1	1	1
58	589-837	SN74S00 N	U10,13,20	3	3	3	3	3	3	3
59	589-840	SN74S10 N	U6	1	1	1	1	1	1	1
60	589-846	SN74S74 N	U35	1	1	1	1	1	1	1
61	590-443	SN74S02 N	U25	1	1	1	1	1	1	1
62	589-816	SN74LS10 N	U32,71,76	3	3	3	3	3	3	3
63	587-287	NE529H	U78	1	1	1	1	1	1	1
64	589-820	SN74LS74 N	U30,37,42,43 47,49,65,74	8	8	8	8	8	8	8
65	590-547	74S124N	U3	1	1	1	1	1	1	1
66	589-813	SN74LS00N	U4,5,7,27,31,33,48,55, 57,59,64,68,77,75	14	14	14	14	14	14	14
67	590-548	SN74LS51N	U34,40,41,62	4	4	4	4	4	4	4
68	589-814	SN74LS04 N	U36,44,51,69, 73	5	5	5	5	5	5	5
69	590-329	SN74LS123 N	U16,58,63	3	3	3	3	3	3	3
70	589-832	SN74LS193 N	U26,45,46,56	4	4	4	4	4	4	4
71	589-934	SN74LS221 N	U11,12,21,39,50 53,54,67,72	9	9	9	9	9	9	9
72	590-449	LM339N	U1,60	2	2	2	2	2	2	2
73	590-450	CD4053BE	U8	1	1	1	1	1	1	1
74	587-771	78L05AWC	U9	1	1	1	1	1	1	1
75	589-933	SN74LS161N	U22,23,28,29 38	5	5	5	5	5	5	5
76	589-932	SN74LS113N	U18	1	1	1	1	1	1	1
77	590-604	SN74S163N	U19,24	2	2	2	2	2	2	2
78	590-601	INTEGRATED CIRCUIT LF356N	U2,14,17	3	3	3	3	3	3	3
79	1409076-AA	INDUCTOR, VAR., 1.5UH, (VIH)	L1	1	1	1	1	1	1	1
80										
81										
82	051-581	INDUCTOR, VAR., 47UH, (VIH)	L2	1	1	1	1	1	1	1

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1409101	SHEET 3		RPV	
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER						
				-01	-02	-03	-04	-05	-06	-07
83	058-994	RESISTOR, VAR. CERMET, 1K OHM, 1/2W, 20%	R21	1	1	1	1	1	1	
84	058-995	RESISTOR, VAR. CERMET, 2K OHM, 1/2W, 20%	R143	1	1	1	1	1	1	
85	058-997	RESISTOR, VAR. CERMET, 5K OHM, 1/2W, 20%	R45	1	1	1	1	1	1	
86	058-998	RESISTOR, VAR. CERMET, 10K OHM, 1/2W, 20%	R50,53	2	2	2	2	2	2	
87	075-215	RESISTOR, VAR. CERMET, 20K OHM, 1/2W, 10%	R88	1	1	1	1	1	1	
88										
89										
90	062-693	RESISTOR, METAL FILM, 20K, 1/4W, 1%	R102	1	1	1	1	1	1	1
91	062-918	RESISTOR, METAL FILM, 825 OHM, 1/4W, 1%	R111,122	2	2	2	2	2	2	2
92	062-970	RESISTOR, METAL FILM, 5.23K, 1/4W, 1%	R110	1	1	1	1	1	1	1
93	062-976	RESISTOR, METAL FILM, 7.15K, 1/4W, 1%	R59	1	1	1	1	1	1	1
94	062-994	RESISTOR, METAL FILM, 16.2K, 1/4W, 1%	R10	1	1	1	1	1	1	1
95	066-005	RESISTOR, METAL FILM, 25.5K, 1/4W, 1%	R101	1	1	1	1	1	1	1
96	066-001	RESISTOR, METAL FILM, 22.6K 1/4W, 1%	R9	1	1	1	1	1	1	1
97	066-017	RESISTOR, METAL FILM, 75K, 1/4W, 1%	R60	1	1	1	1	1	1	1
98	066-060	RESISTOR, METAL FILM, 26.1K, 1/4W, 1%	R58	1	1	1	1	1	1	1
99	066-599	RESISTOR, METAL FILM, 12.7K, 1/4W, 1%	R11	1	1	1	1	1	1	1
100	066-849	RESISTOR, C.F. 100K, 1/4W, 5%	R43	1	1	1	1	1	1	1
101	076-134	RESISTOR, METAL FILM, 48.7K, 1/4W, 1%	R6	1	1	1	1	1	1	1
102	066-657	RESISTOR, METAL FILM, 38.3K, 1/4W, 1%	R140	1	1	1	1	1	1	-
103	066-925	RESISTOR, METAL FILM, 22.1K, 1/4W, 1%	R140							1
104	041-793	RESISTOR, CARBON, 10 MEG, 1/4W, 5%	R57	1	1	1	1	1	1	1
105	066-938	RESISTOR, CARBON, 47 OHM, 1/4W, 5%	R65,72,75,83-86,116,121,123,124-131,155	20	20	20	20	20	20	20
106			R161							
107	066-668	RESISTOR, C.F. 4.7K OHM, 1/4W, 5%	R15,20,31,38,44,46,56,70,73,74,98,103,160							13
108	066-663	RESISTOR, C.F. 220 OHM, 1/4W, 5%	R37							1
109	066-652	RESISTOR, C.F., 470 K, 1/4W, 5%	R4,5,100	3	3	3	3	3	3	3
110	066-663	RESISTOR, C.F., 220 OHM, 1/4W, 5%	R37,160	2	-	-	-	-	-	-
111	066-665	RESISTOR, C.F., 1K OHM, 1/4W, 5%	R39,42,54,55,71,76,77,80,81,97,105,106,120,145,132,136-139,141,153,158	22	22	-	-	-	-	-
-										
112	066-668	RESISTOR, C.F., 4.7K, 1/4W, 5%	R15,20,31,38,44,46,56,70,73,74,98,103	12	-	-	-	-	-	-
113	066-689	RESISTOR, C.F., 2.2K, 1/4W, 5%	R12,27,68,108,156,157,144	7	7	7	7	7	7	7
114	066-711	RESISTOR, C.F., 7.5K, 1/4W, 5%	R48	1	1	1	1	1	1	1
115	066-712	RESISTOR, C.F., 22K, 1/4W, 5%	R28,40,41,62,64,133,154	7	7	7	7	7	7	7
116	066-810	RESISTOR, C.F., 10 OHM, 1/4W, 5%	R23	1	1	1	1	1	1	1
117	066-812	RESISTOR, C.F., 100 OHM, 1/4W, 5%	R13,107,114	3	3	3	3	3	3	3
118	066-818	RESISTOR, C.F., 470 OHM, 1/4W, 5%	R47,117	2	2	2	2	2	2	2
119	066-824	RESISTOR, C.F., 1.5K, 1/4W, 5%	R35,113	2	2	2	2	2	2	2
120	066-827	RESISTOR, C.F., 3.9K, 1/4W, 5%	R118,119	2	2	2	2	2	2	2
121	066-828	RESISTOR, C.F., 4.3K, 1/4W, 5%	R34	1	1	1	1	1	1	1
122	066-829	RESISTOR, C.F., 6.8K, 1/4W, 5%	R93	1	1	1	1	1	1	1
123	066-830	RESISTOR, C.F., 10K, 1/4W, 5%	R1,2,17,18,24,29,32,36,61,66,67,69,79,82,87,92,99,104,109,148-152	24	24	24	24	24	24	24
-										
124	066-669	RESISTOR, C.F., 8.2K, 1/4W, 5%	R115	1	1	1	1	1	1	1
125	066-831	RESISTOR, C.F., 11K, 1/4W, 5%	R19	1	1	1	1	1	1	1

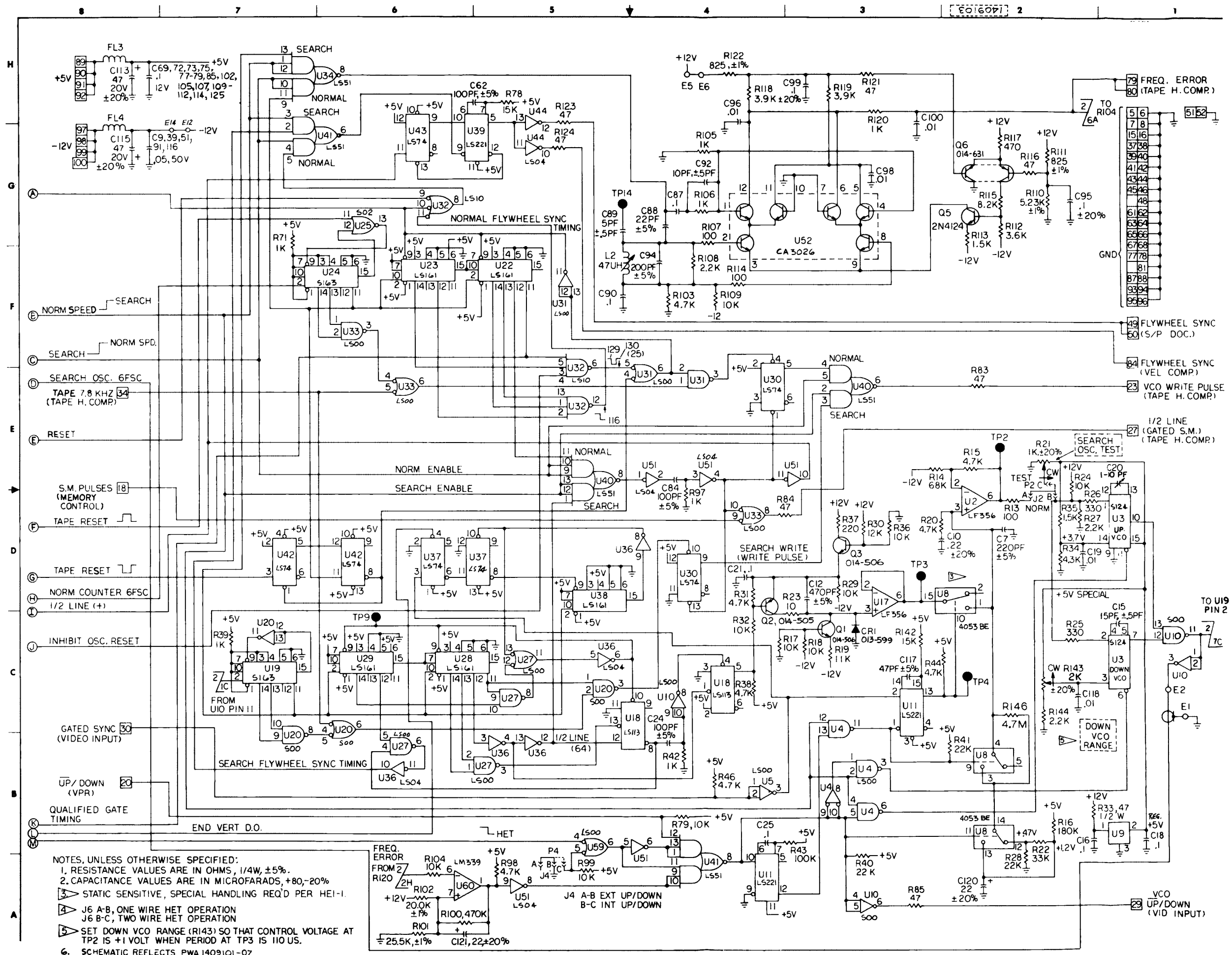
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1409101	RFV				
						SHEET 4	L				
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER							
				-01	-02	-03	-04	-05	-06	-07	
126	066-832	RESISTOR, C.F., 18K, 1/4W, 5%	R94	1	1	1	1	1	1		
127	066-833	RESISTOR, C.F., 56K, 1/4W, 5%	R7,91,95	3	3	3	3	3	3	3	
128	066-838	RESISTOR, C.F., 330 OHM, 1/4W, 5%	R25,26	2	2	2	2	2	2	2	
129	066-839	RESISTOR, C.F., 560 OHM, 1/4W, 5%	R3	1	1	1	1	1	1	1	
130	066-847	RESISTOR, C.F., 33K, 1/4W, 5%	R90,134,22,52	4	4	4	4	4	4	4	
131	066-856	RESISTOR, C.F., 15K, 1/4W, 5%	R49,78,142	3	3	3	3	3	3	3	
132	066-863	RESISTOR, C.F., 3.6K, 1/4W, 5%	R112	1	1	1	1	1	1	1	
133	066-865	RESISTOR, C.F., 12K, 1/4W, 5%	R30,51	2	2	2	2	2	2	2	
134	066-866	RESISTOR, C.F., 27K, 1/4W, 5%	R147	1	1	1	1	1	1	1	
135	066-868	RESISTOR, C.F., 120K, 1/4W, 5%	R8	1	1	1	1	1	1	1	
136	066-873	RESISTOR, C.F., 20K, 1/4W, 5%	R89	1	1	1	1	1	1	1	
137	066-958	RESISTOR, C.F., 75K, 1/4W, 5%	R96	1	1	1	1	1	1	1	
138	076-009	RESISTOR, C.F., 68K, 1/4W, 5%	R14	1	1	1	1	1	1	1	
139	076-011	RESISTOR, C.F., 180K, 1/4W, 5%	R16	1	1	1	1	1	1	1	
140	076-050	RESISTOR, C.F., 270K, 1/4W, 5%	R63	1	1	1	1	1	1	1	
141	066-858	RESISTOR, C.F., 4.7M, 1/4W, 5%	R146	1	1	1	1	1	1	1	
142	066-913	RESISTOR, C.F., 220K, 1/4W, 5%	R135	1	1	1	1	1	1	1	
143	041-283	RESISTOR, COMP, 47 OHM, 1/2W, 5%	R33	1	1	1	1	1	1	1	
144	066-665	RESISTOR, C.F., 1K OHM, 1/4W, 5%	R39,42,54,55,71,76,77,80, 81,97,105,106,120,132, 136-139,141,145,153,158, 162			23	23	23	23	23	
145											
146	014-505	TRANSISTOR, CD445 (2N3251)	Q2		1	1	1	1	1	1	
147	014-506	TRANSISTOR, CD446 (2N350)	Q1,3	2	2	2	2	2	2	2	
148	014-581	TRANSISTOR, (2N2369A)	Q4		1	1	1	1	1	1	
149	014-631	TRANSISTOR, DUAL, CD515 (2N353C)	Q6		1	1	1	1	1	1	
150	580-226	TRANSISTOR, (2N4124)	Q5		1	1	1	1	1	1	
151											
152											
153											
154	280-130	TRANSISTOR, MTG. PAD, TO-18	REF. DSI, Q1-4	5	5	5	5	5	5	5	
155	283-105	SPACER, UNTHREADED, .250 OD, .125 LG			1	1	1	1	1	1	
156	471-062	SCREW, MACH. PAN HD X RED, 4-40 X .375 LG			1	1	1	1	1	1	
157	473-325	SCREW, MACH. PAN HD, 4-40 X .312 LG		7	7	7	7	7	7	7	
158	501-169	WASHER, PLAIN #4		7	7	7	7	-	-	-	
159	502-002	WASHER, LOCK, HELICAL SPRING #4			1	1	1	1	1	1	
160	474-500	SCREW, MACH, PAN HD, XREC, 4-40X .312 LG. (ASSEM WSHR)						7	7	7	
161											
162	143-981	JACK, P.C. TIP	REF. J1-12	33	33	33	33	33	33	33	
163	187-259	TERMINAL, TEST POINT	TP1-14	14	14	14	14	14	14	14	
164	1409035-01	BUSS BAR, INSULATED, .5 INCH SPACING		A/R	A/R	A/R	A/R	A/R	A/R	A/R	
165	302-395	CABLE, STRAP "MOUSE TAIL"		4	4	4	4	4	4	4	
166	602-044	PLUG, SHORTING, RED	J1-12	12	12	12	12	12	12	12	
167	611-486	WIRE, #26 AWG, WHT		A/R	A/R	A/R	A/R	A/R	A/R	A/R	
168	616-569	CABLE, COAX, 75 OHM		A/R	A/R	A/R	A/R	A/R	A/R	A/R	
169		▷ STATIC SENSITIVE, SPECIAL HANDLING REQD									
170		▷ PRESTRESSED ICs									



Assembly No. 1409101-07L. Tape VCO PWA, A6











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Tape VCO PWA, A6
(Sheet 1 of 2)

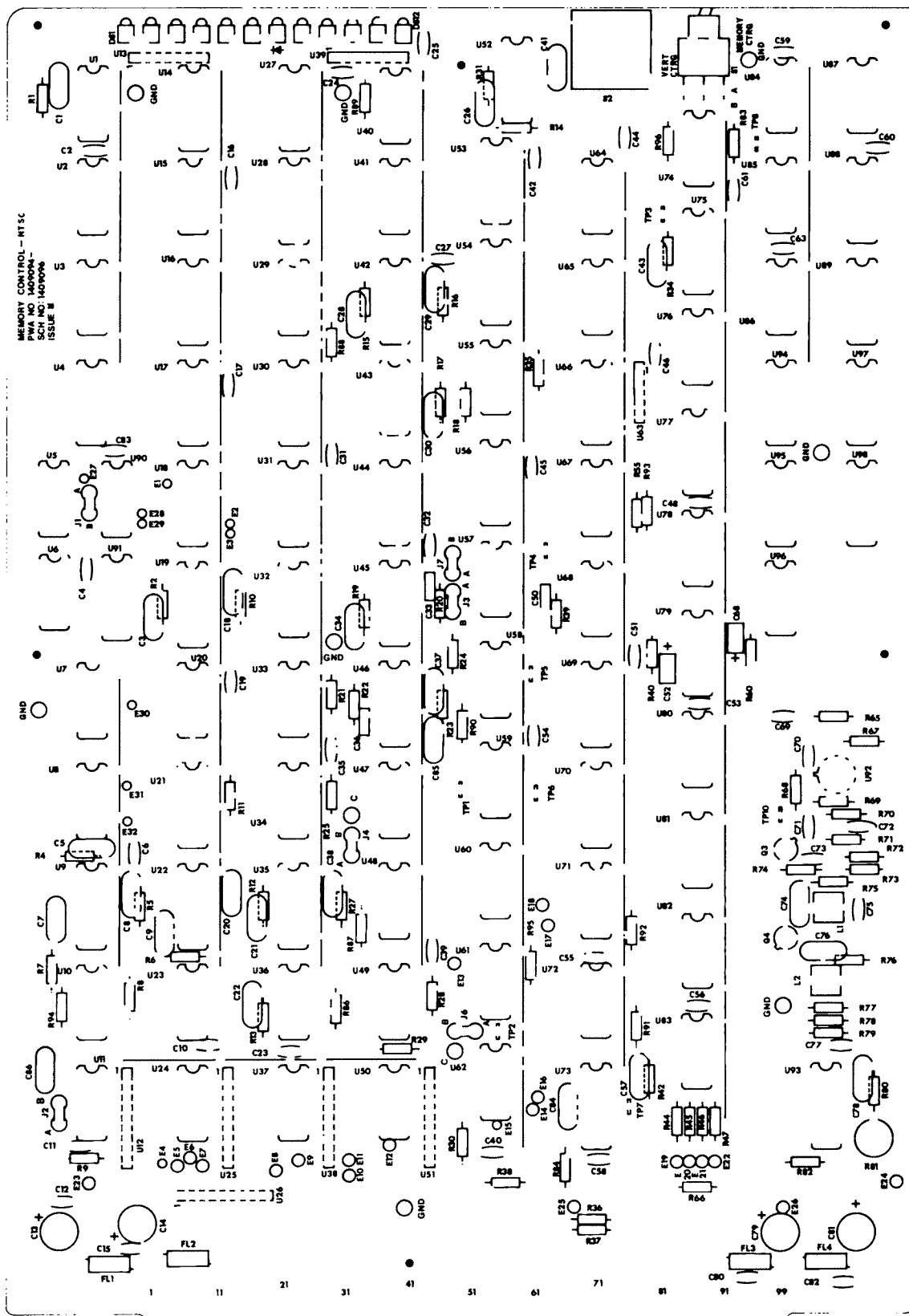


Schematic No. 1409103G.
Tape VCO PWA, A6
(Sheet 2 of 2)

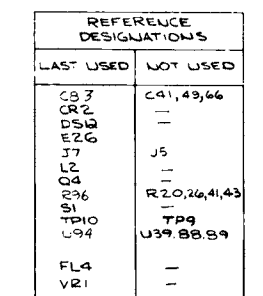
ITEM NO.	PART NUMBER	D	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER							
					-01	-02	-03	-04	-05	-06	-07	-08
1					-01	-01	-02	-03	-04	-06		
2	1461805-02		PWA, MEMORY CONTROL PIGGYBACK							-		-
3	1409096		SCHEMATIC REF.		(1)	(1)	(1)	(1)	C	D	E	E
4	1461841		SCHEMATIC REF.							-	C	D
5	1402331-3C		LABEL, MODULE							1	1	1
6	1402332-01		EXTRACTOR ARM							1	1	1
7	1402333-AA		SHIELD							1	1	1
8	1461805-03		PWA MEMORY CONTROL PIGGYBACK									1
9	051-770		INDUCTOR, FILTER FL1-4		4	4	4	4	4	4	4	4
10	1374388-AD		INDUCTOR, VARIABLE, 2.2uH L1							1	1	1
11	1374388-AW		INDUCTOR, VARIABLE, 12uH L2							1	1	1
12	302-395		STRAP, CABLE, MOUSE TAIL						3	3	3	3
13												
14	064-116		CAPACITOR, CER., DISC., .01uF, -20%, 50V C71			1	1	1		1	1	1
15	064-492		CAPACITOR, CER, DISC., .1uF, -20% 12V C2,4,6,10,11,15,16, 17,19,23,24,25,27, 31,32,35,39,40,42, 44,45,48,51,53-56, 58-61,63,69,77,80, 83,46		37	37	37	37	37	37	37	37
16	064-569		CAPACITOR, CER., DISC., .05uF, -20%, 50V C12,70,72,73,75, 82		6	6	6	6	6	6	6	6
17	034-177		CAPACITOR, MICA, 100pF, 5%, 500V C1,5,8,22,29,30,43,74,85		9	9	9	9	9	9	9	9
18	034-181		47pF, 5% 500V C3,7,9,18,26,20,34,41, 78		9	9	9	9	9	9	9	9
19	034-239		130pF, $\pm 1\%$ 500V C49									
20	034-950		1000pF, $\pm 5\%$, 100V C21							1	1	1
21	056-601		47pF, $\pm .5pF$, 500V C37,57		2	2	2	2	2	2	2	2
22	034-269		22pF, 5%, 500V C84							1	1	1
23	034-311		1000pF, 1%, 100V C28,38		2	2	2	2	2	2	2	2
24	056-105		CAPACITOR, MICA, 18pF, $\pm .5pF$, 500V C76							1	1	1
25	064-316		CAPACITOR, MONO, 2.2uF, 50V C50							1	1	1
26	034-199		CAPACITOR, MICA, 300pF, 5%, 500V C86							1	1	1
27												
28	069-103		CAPACITOR, POLY, .0047uF, 5%, 50V C33			1	1	1		1	1	1
29	069-109		CAPACITOR, POLY, .0022uF, 5%, 50V C36			1	1	1		1	1	1
30												
31												
32												
33	037-600		CAPACITOR, TANT., .22uF, 5%, 35V C52			1	1	1		1	1	1
34	037-775		CAPACITOR, TANT., .33uF, 5%, 35V C68			1	1	1		1	1	1
35	037-892		CAPACITOR, TANT., .47uF, 5%, 20V C13,14,79,81		4	4	4	4	4	4	4	4

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-140 9094	SHEET 2 OF 5		REV V				
ITEM NO	PART NUMBER	DESCRIPTION			REF DESIG	QTY REQD PER DASH NUMBER							
						-01	-02	-03	-04	-05	-06	-07	-08
36													
37	581-522	LED, RED		DS1-5,7-12		1		1	-	-	-	-	-
38	581-522	LED, RED (PCH190R)		DS1-5,8-12				-	10	10	10	10	10
39													
40													
41													
42													
43	581-610	LED, GREEN		DS6		1	1	1	-	+	-	-	-
44	581-610	LED, GREEN (PCH190G)		DS6,7				-	2	2	2	2	2
45													
46	589-838	I.C. SN74S04N		U50,82		2	2	2	2	2	2	2	2
47	590-332	SN74LS02N		U96			1	1	1	1	1		1
48	589-816	SN74LS10N		U2,23		2	2	2	2	2	2	2	2
49	589-802	NE529H (SIGNETICS)		U92			1	1	1	1	1	1	1
50	589-820	SN74LS74N		U6,8,29,36,47,48,80,81,67		9	9	9	9	9	9	9	9
51	590-615	SN74LS139N		U14,27		2	2	2	2	2	2	2	2
52	589-813	SN74LS00N		U3,20,32,34,41,59,62,78,83,87,90			1	1	1	1	1	1	11
53	589-814	SN74LS04N		U11,15,24,37,55,64,68		7	7	7	7	7	7	7	7
54	589-815	SN74LS08N		U60,65		2	2	2	2	2	2	2	2
55	589-832	SN74LS193N		U4,21,28,30,31,44,53,54,56,69,70			1	1	1	1	1	1	11
56	589-934	SN74LS221N		U9,19,22,35,42,45,46,52,73,75,79,93		2	2	2	2	2	2	2	2
57	590-568	SN74S113N		U49			1	1	1	1	1	1	1
58	590-620	SN74LS86N		U33			1	1	1	1	1	1	1
59	589-818	SN74LS20N		U1			1	1	1	1	1	1	1
60	589-830	SN74LS174N		U16			1	1	1	1	1	1	1
61	589-932	SN74LS113N		U5,7,10,40,43,57,58,61,71,72,74,84,85,86		14	14	14	14	14	14	14	14
62	589-824	SN74LS153N		U17,18		2	2	2	2	2	2	2	2
63	590-333	SN74LS163N		U66			1	1	1	1	1	1	1
64	589-825	SN74LS157N		U91			1	1	1	1	1	1	1
65	590-328	I.C. SN74LS32N		U76			1	1	1	1	1	1	1
66	039-239	NETWORK, RESISTOR, 47 OHM, 2%		U12,25,26,38,51		5	5	5	5	5	5	5	5
67	039-240	NETWORK, RESISTOR, 560 OHM, 2%		U13,39		2	2	2	2	2	2	2	2
68	039-263	NETWORK, RESISTOR, 4.7K		U63			1	1	1	1	1	1	1
69	066-665	RESISTOR, CARBON, 1K OHMS, 1/4W, 5%		R1,4,13,17,69,78,79,86-89,91-96		17	17	17	17	17	17	17	17
70													
71	066-689	RESISTOR, CARBON, 2.2K OHMS, 1/4W, 5%		R71,75		2	2	2	2	2	2	2	2
72													
73													
74													
75	066-812	RESISTOR, CARBON, 100 OHM, 1/4W, 5%		R68,72,90		3	3	3	3	3	3	3	3
76													
77	066-829	RESISTOR, CARBON, 0.8K OHM, 1/4W, 5%		R80			1	1	1	1	1	1	1
78	066-830	RESISTOR, CARBON, 10K OHM, 1/4W, 5%		R8,9,18,21,24,25,35,55,76,83,36,37,38,39		14	14	14	14	14	14	14	14

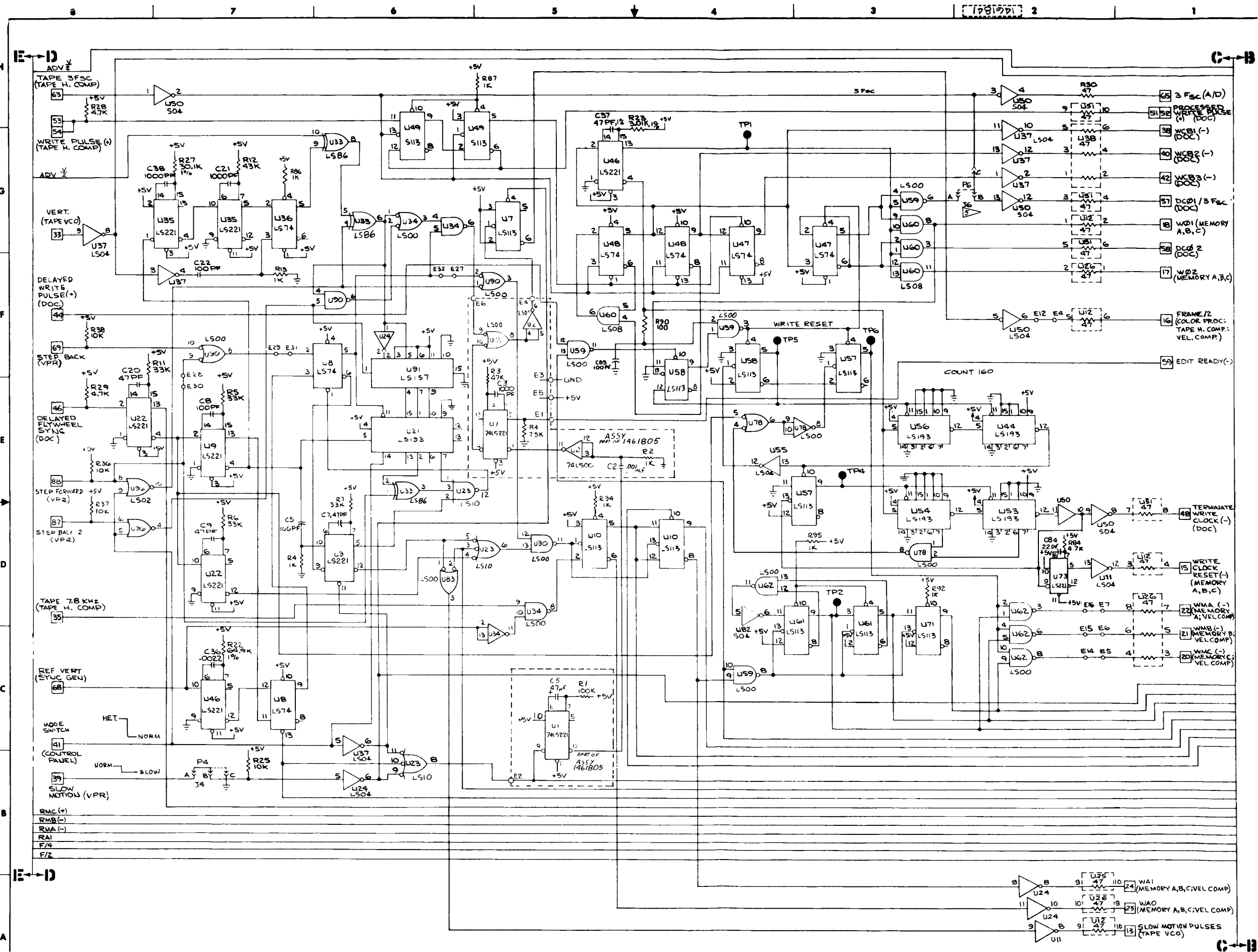
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-14 09094	SHEET 3 OF 5		REV V				
ITEM NO.	PART NUMBER	DESCRIPTION			REF DESIGN	QTY REQD PER DASH NUMBER							
						-01	-02	-03	-04	-05	-06	-07	-08
79	066-847	RESISTOR, CARBON, 33K OHM, 1/4W, 5% R2,5,6,7,11,16,19,31,34				9	9	9	9	9	9	9	9
80	066-848	RESISTOR, CARBON, 43K OHM, 1/4W, 5% R12				1	1	1	1	1	1	1	1
81													
82	066-856	RESISTOR, CARBON, 15K OHM, 1/4W, 5% R10,14				2	2	2	2	2	2	2	2
83													
84	066-938	RESISTOR, CARBON, 47 OHM, 1/4W, 5% R30,44,45,46,47,66,67,70,74,77				10	10	10	10	10	10	10	10
85													
86	066-668	RESISTOR, CARBON, 4.7K OHM, 1/4W, 5% R28,29,65,73,82,84				6	6	6	6	6	6	6	6
87													
88	602-044	PLUG, SHORTING (RED) P1-4,6,7				6	6	6	6	6	6	6	6
89	280-130	MOUNTING PAD, TRANSISTOR T0-18 REF: Q3,4,DS1-12				14	14	14	14	14	14	14	14
90													
91		WIRE, INSULATED, 26 AWG			A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R
92		WIRE, INSULATED, 22 AWG			A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R
93													
94	066-003	RESISTOR, M.F., 23.7K OHM, 1/4W, 1% R20				1	1	1	1	1	1	1	1
95	062-639	RESISTOR, M.F., 3.01K OHM, 1/4W, 1% R23,42				2	2	2	2	2	2	2	2
96	066-183	RESISTOR, M.F., 60.4K OHM, 1/4W, 1% R40				1	1	1	1	1	1	1	1
97	066-655	RESISTOR, M.F., 68.1K OHM, 1/4W, 1% R60				1	1	1	1	1	1	1	1
98	066-656	RESISTOR, M.F., 30.1K OHM, 1/4W, 1% R27,41				2	2	2	2	2	2	2	2
99	066-656	RESISTOR, M.F., 30.1K OHMS, 1/4W, 1% R27				1	1	1	1	1	1	1	1
100	076-190	RESISTOR, M.F., 64.9K OHM, 1/4W, 1% R15,22				2	2	2	2	2	2	2	2
101													
102	472-113	SCREW, MACH., PAN HD., #2-56 X .250 LG									2	2	2
103	503-054	WASHER, PLAIN NYLON #2									4	4	4
104													
105	058-997	RESISTOR, VARIABLE, CERMET, 5K OHM, 1/2W, 20% R81				1	1	1	1	1	1	1	1
106													
107		NOTE:											
108		 PRESTRESSED IC.											
109													
110	014-506	TRANSISTOR, CD446, (2N2501) T0-18 Q3				1	1	1	1	1	1	1	1
111	014-581	TRANSISTOR, (2N2369A) T0-18 Q4				1	1	1	1	1	1	1	1
112													
113	119-711	SWITCH, P.C., MTG, DIGITAL, THUMBWHEEL S2				1	1	1	1	1	1	1	1
114	119-279	SWITCH, P.C., MTG., DPDT S1				1	1	1	1	1	1	1	1
115	143-981	JACK, P.C. TIP REF: J1,2,3,7(A,B) J4,6 (A,B,C)				14	14	14	14	14	14	14	14
116	1409036-01	BUSS BAR, INSULATED 1" SPACING			A/R	A/R	A/R	A/R	A/R	A/R	4	4	4
117	187-259	TERMINAL, TEST POINT TP1-8,10				10	10	10	10	10	9	9	9
118	474-500	SCREW, MACH, PAN HD, 4-40 X .312 LG, XREC, (ASSEM. WSHR)									7	7	7
119	283-105	SPACER, UNTHREADED .125 LG BODY				1	1	1	1	1	1	1	1
120	471-062	SCREW, MACH, PAN HD, XREC, 4-40 X .375 LG				1	1	1	1	1	1	1	1
121	473-325	SCREW, MACH, PAN HD, XREC, 4-40 X .312 LG				7	7	7	7	7	7	7	7
122	501-169	WASHER, PLAIN, #4				7	7	7	7	7	7	7	7
123	502-002	WASHER, LOCK, SPRING #4				1	1	1	1	1	1	1	1



Assembly No. 1409094-08V. Memory Control PWA, A7



3-59/3-60



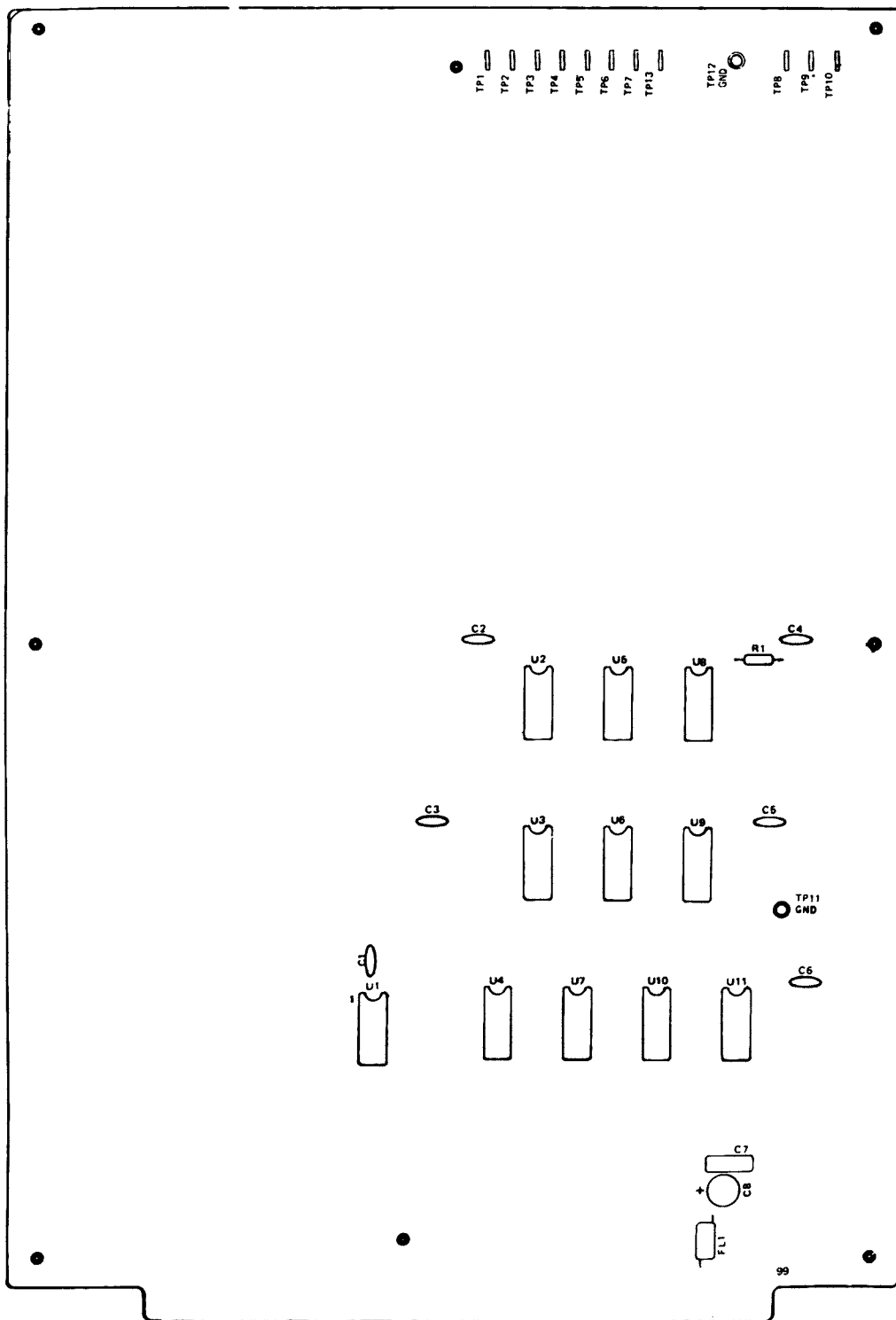
Schematic No. 1461841D.
Memory Control PWA, A7
(Sheet 2 of 3)

1409122-01

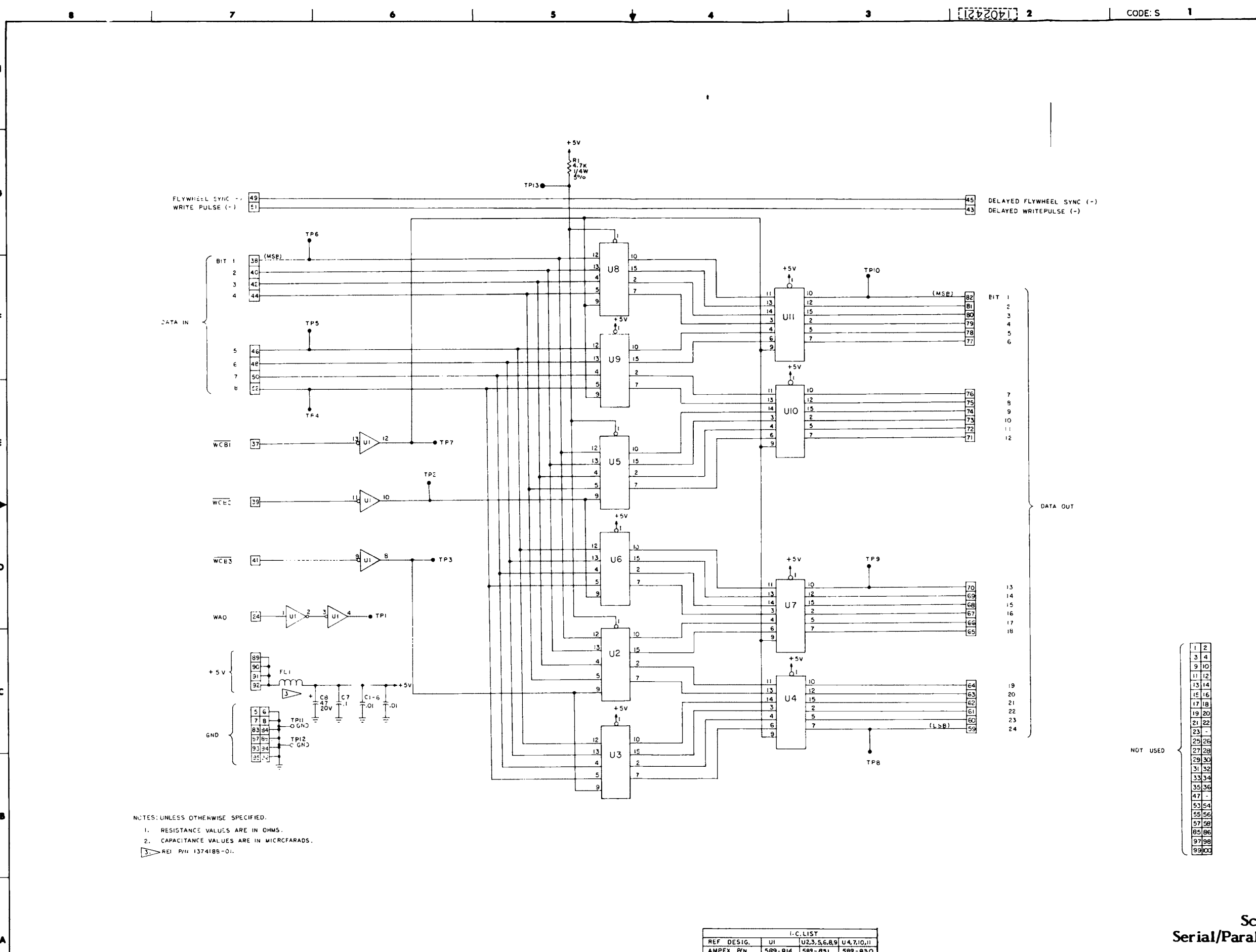
SERIAL/PARALLEL CONVERTER PWA, A8
NEXT HIGHER ASSEMBLY 1409000

REV. D

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







Assembly No. 1409122-01D. Serial/Parallel Converter PWA, A8



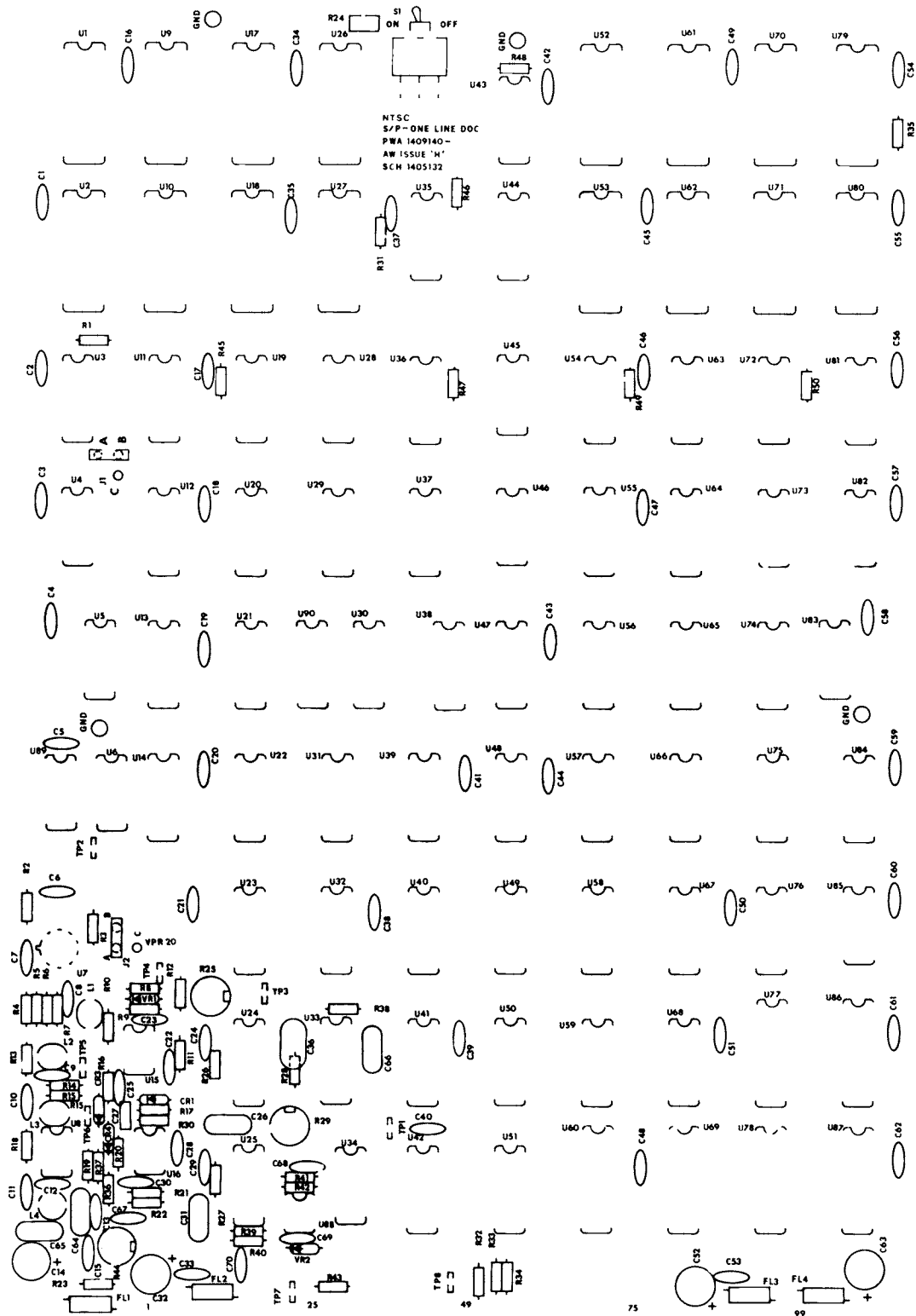
Schematic No. 1402421D.
Serial/Parallel Converter PWA, A8

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER						
				-01	-02	-03	-04	-05	-06	
1				-01	-02	-03	-04	-05	-06	
2	1405132	SCHEMATIC		(-)	(-)	(-)	(-)	F	F	
3										
4										
5	1402331-BF	LABEL, MODIILE			1	1	/	/	1	
6	1402332-01	EXTRACTOR ARM			1	1	/	/	1	
7	1402333-AA	SHIELD			1	1	/	/	1	
8										
9										
10										
11										
12										
13	064-116	CAPACITOR, CER., DISC., .01uF, 50V, ^{+80%} _{-20%} C7-13,15,22,25,28,30,53,68		14	14	14	14	14	14	
14	064-492	CAPACITOR, CER., DISC., .1uF, 12V, ^{+80%} _{-20%} C1-6,16-21,23,24,29,33-35,37-51,54-62,67,69,70		45	45	45	45	45	45	
15										
16										
17										
18	064-307	CAPACITOR, CER., MONO., .22uF, 100V, ^{+20%} _{-20%} C27			1	1	/	/	1	
19										
20										
21										
22	034-177	CAPACITOR, MICA, 100pF, 500V, 5% C66			1	1	/	/	1	
23	034-199	CAPACITOR, MICA, 300pF, 500V, 5% C64			1	1	/	/	1	
24	034-208	CAPACITOR, MICA, 30pF, 500V, 5% C26			1	1	/	/	1	
25	034-935	CAPACITOR, MICA, 240pF, 500V, 5% C65			1	1	/	/	1	
26	034-950	CAPACITOR, MICA, 1000pF, 100V, 5% C36			1	1	/	/	1	
27	056-163	CAPACITOR, MICA, 470pF, 500V, 5% C31			1	1	/	/	1	
28	034-181	CAPACITOR, MICA 47pF, 500V, 5% C71							1	
29										
30										
31	037-892	CAPACITOR, TANT., 47uF, 20V, 20% C14,32,52,63		4	4	4	4	4	4	
32										
33										
34	013-224	DIODE, ZENER, 6.8V, 1N754A VR1-2		2	2	2	2	2	2	
35										
36	013-599	DIODE, SWITCHING, CD458 (1N4531) CR1,3,4		3	3	3	3	3	3	

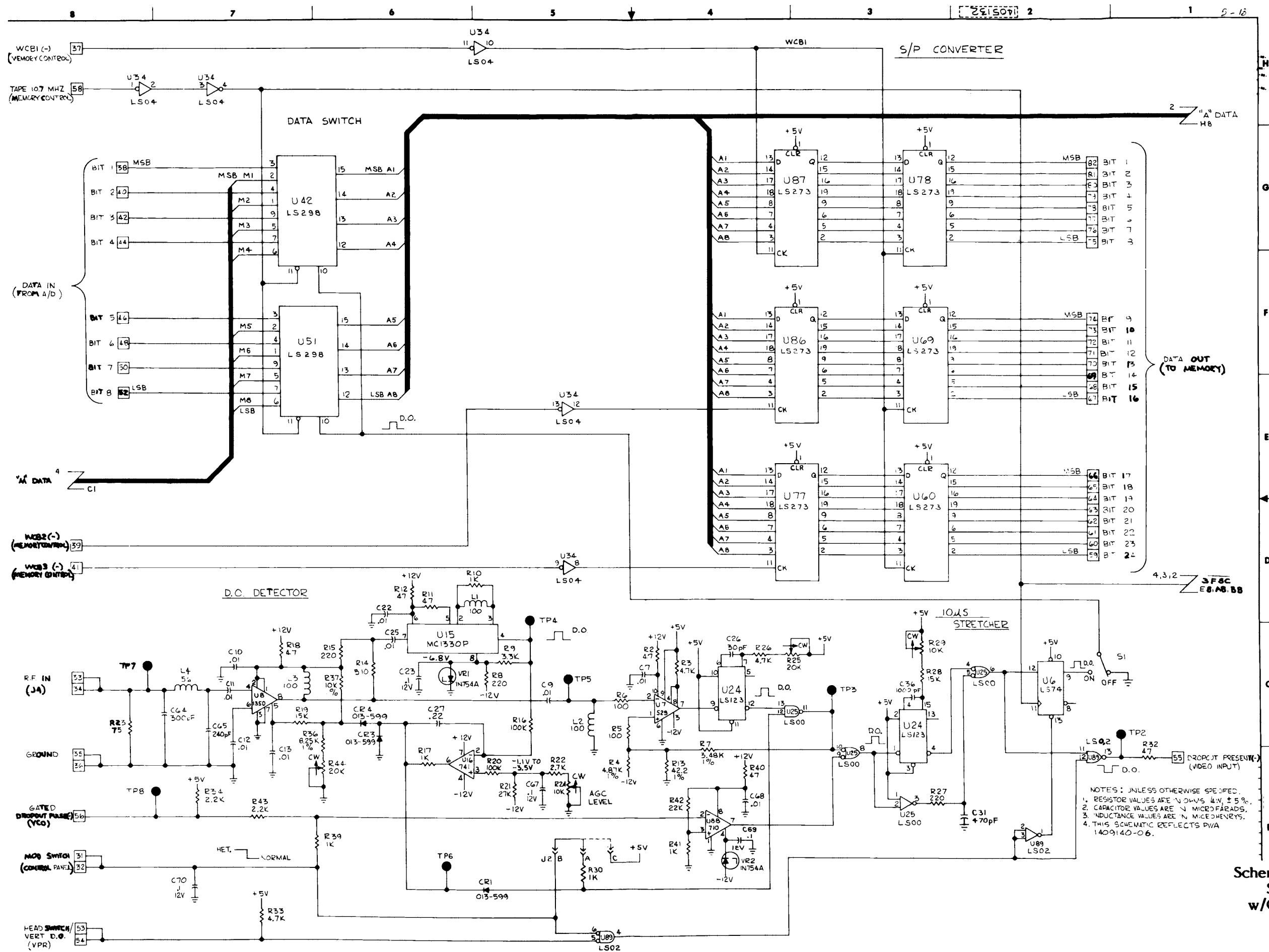
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1409140	SHEET 2		PFV AP
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER					
				-01	-02	-03	-04	-05	-06
37	051-773	FERRITE CHCKE, Z MAX = 750 OHMS, + 20% FL1-4		4	4	4	4	4	
38									
39	068-025	INDUCTOR, FIXED, 100uH, ±5% L1,2,3		3	3	3	3	3	
40	068-129	INDUCTOR, FIXED, .56uH, ±5% L4		1	1	1	1	1	
41									
42									
43									
44	590-611	INTEGRATED CIRCUIT, LINEAR, 741 	U16	1	1	1	1	1	
45	587-163	MC1330P	U15	1	1	1	1	1	
46	587-164	MC1350P	U8	1	1	1	1	1	
47	587-287	NE529K	U7	1	1	1	1	1	
48	590-553	INTEGRATED CIRCUIT, LINEAR, TL710N 	U88	1	1	1	1	1	
49									
50									
51									
52	589-816	INTEGRATED CIRCUIT, TTL., 74LS10 	U5	1	1	1	1	1	
53	589-820	74LS74	U4,6,85	3	3	3	3	3	
54	590-615	74LS139	U44	1	1	1	1	1	
55	589-813	74LS00	U25,82,83	3	3	3	3	3	
56	589-814	74LS04	U34,45	2	2	2	2	2	
57	589-815	74LS08	U46,73	2	2	2	2	2	
58	590-329	74LS123	U24	1	1	1	1	1	
59	589-934	74LS221	U33	1	1	1	1	1	
60	590-332	74LS02	U89	1	1	1	1	1	
61	589-831	74LS175	U22,31	2	2	2	2	2	
62	589-830	74LS174	U3,14,20,29,38,40,41,47,49,50,56,57,65,66,90	6	6	6	6	6	
63	590-333	74LS163	U11,12,36,54,59,68,76	7	7	7	7	7	
64	590-606	74LS283	U13,21,23,30,32,37,39,48,58,67,79,84	2	2	2	2	2	
65	590-554	74LS298	U42,51,55,64	4	4	4	4	4	
66	590-335	INTEGRATED CIRCUIT, TTL., 74LS273 	U60,69,77,78,86,87	6	6	6	6	6	
67	587-537	INTEGRATED CIRCUIT, 74LS221 	U81					1	
68									
69									
70									
71									
72	589-937	INTEGRATED CIRCUIT, TTL., 74LS174 	U35,43	2	2	2	2	2	
73	590-604	INTEGRATED CIRCUIT, TTL., 74LS163 	U19,28,63,72	4	4	4	4	4	
74									
75									
76									
77	589-482	INTEGRATED CIRCUIT, TTL., RAM, 93L422PC	U1,2,9,10,17,18,26,27,52,53,61,62,70,71,79,80	6	6	6	6	6	
78		 INDICATES PRESTRESSED I.C.'S							
79									

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1409140	SHEET 3		PPV P
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER					
				-01	-02	-03	-04	-05	-06
80	062-983	RESISTOR, FIXED, M. F. 10.0K OHM, 1/4W, 1% R37			-	1	1	1	
81	042-378	RESISTOR, FIXED, M. F. 8.25K OHM, 1/4W, 1% R36			-	1	1	1	
82	062-800	RESISTOR, FIXED, M.F., 21.5K OHMS, 1/4W, 1% R36		1		-	-	-	
83	062-997	18.2K OHMS, R37		1		-	-	-	
84	062-957	3.48K OHMS, R7		1		1	1	1	
85	062-967	4.87K OHMS, R4		1		1	1	1	
86	076-339	RESISTOR, FIXED, M.F., 42.2 OHMS, 1/4W, 1% R13		1		1	1	1	
87									
88									
89									
90	066-665	RESISTOR, FIXED, C.F. 1K OHMS, 1/4W, 5% R10, 17, 30, 39, 41			5	5	5	5	5
91	066-663	RESISTOR, FIXED, C.F., 220 OHMS, 1/4W, 5% R8, 15, 27		3	3	3	3	3	3
92	066-664	510 OHMS, R14		1	1	1	1	1	
93	066-665	1K OHMS, R10, 17, 39, 41		4	-	-	-	-	
94	066-666	2.7K OHMS, R22		1	1	1	1	1	
95	066-668	4.7K OHMS, R1, 3, 30, 31, 33, 35		6	-	-	-	-	
96	066-689	2.2K OHMS, R34, 43		2	2	2	-	-	
97	066-712	22K OHMS, R42		1	1	1	1	1	
98	066-720	3.3K OHMS, R9		1	1	1	1	1	
99	066-812	100 OHMS, R5, 6		2	2	2	2	2	
100	066-826	2K OHMS, R26		1	-	-	-	-	
101	066-849	100K OHMS, R16, 20		2	2	2	2	2	
102	066-856	15K OHMS, R19, 28, 38		3	3	3	3	3	
103	066-866	27K OHMS, R21		1	1	1	1	1	
104	066-938	47 OHMS, R2, 11, 12, 18, 32, 40		6	6	6	6	6	
105	076-045	RESISTOR, FIXED, C.F., 75 OHMS, 1/4W, 5% R23		1	1	1	1	1	
106	066-668	RESISTOR, FIXED, C.F. 4.7K OHMS, 1/4W, 5% R1, 3, 26, 31, 33, 35			6	6	-	-	
107	066-668	RESISTOR, FIXED, C.F. 4.7K OHMS, 1/4W, 5% R1, 3, 26, 31, 33, 35, 46, 49					10	10	10
108	066-689	RESISTOR, FIXED, C.F. 2.2K OHMS, 1/4W, 5% R34, 43, 45, 50					4	4	4
109	058-998	RESISTOR, VARIABLE, CERMET, 10K OHM, 1/4, R29			-	1	1	1	
110	058-998	RESISTOR, VARIABLE, CERMET, 10K OHMS, 1/2W, R29, 44			2	-	-	-	
111	058-998	RESISTOR, VARIABLE, CERMET, 10K OHMS, 1/2W R25, 29, 44		3	-	-	-	-	
112	058-999	RESISTOR, VARIABLE, CERMET, 20K OHMS 1/2W R25			-	-	-	-	
113	075-214	RESISTOR, VARIABLE, CERMET, 10K OHMS, 1/2W R24		1	-	1	1	1	
114	058-999	RESISTOR, VARIABLE, CERMET, 20K OHM, 1/2W R25, 44			-	2	2	2	2
115	057-120	RESISTOR, FIXED, M.F. 10K OHM, 1/4W, 2% R51						1	
116									
117	119-279	SWITCH, TOGGLE, DPDT S1		1	1	1	1	1	
118									
119									
120	187-259	TERMINAL, P.C., TEST POINT TP1-8		8	8	8	8	8	
121									
122									
123	143-981	JACK, P.C., CLOSED ENTRY REF: J2A, B, C J1A, B, C		6	6	6	6	6	6
124	602-044	PLUG, SHORTING, RED J1, 2		2	2	2	2	2	2

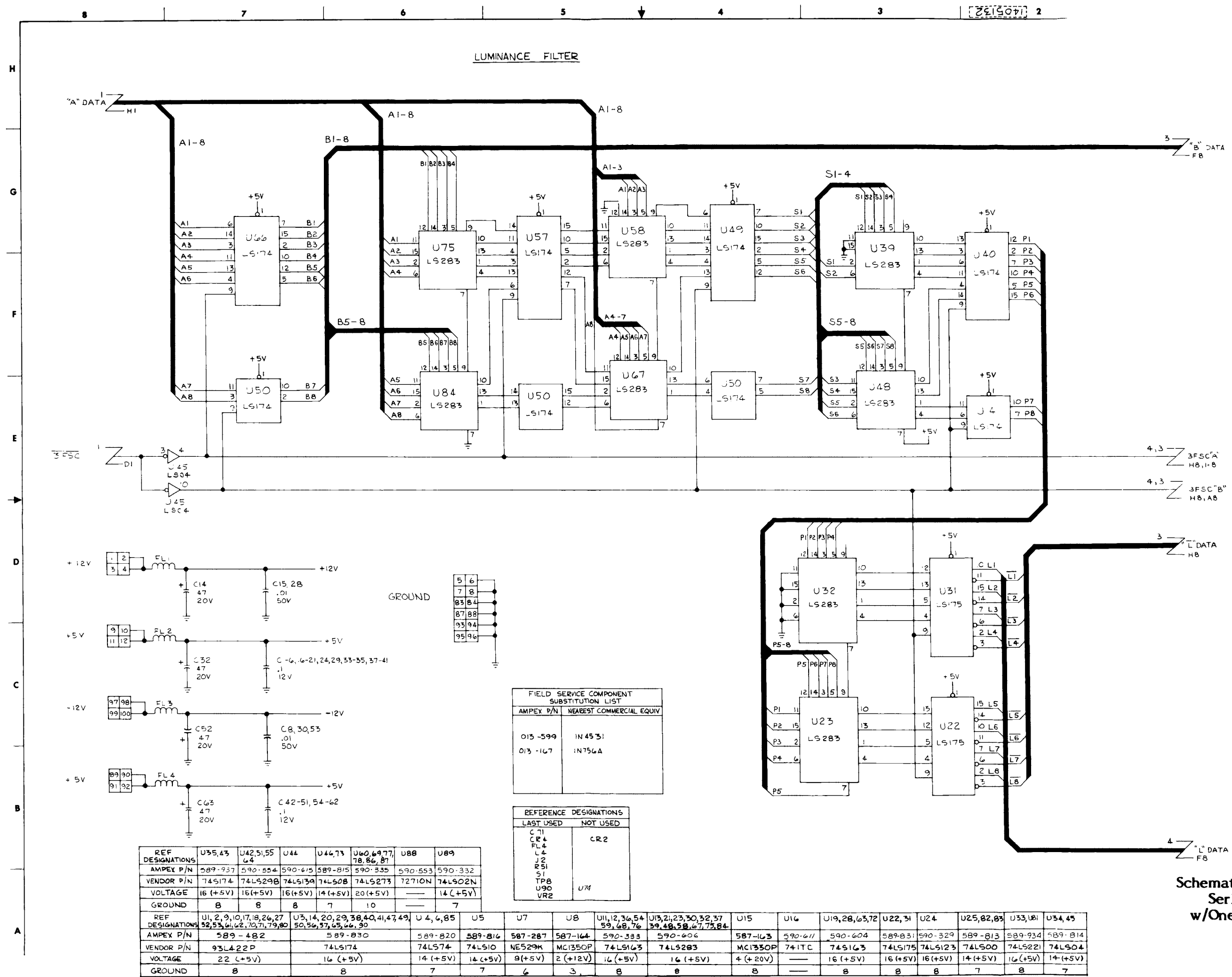
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS		LM-1409140		SHEET 4		REV F	
ITEM NO.	PART NUMBER	DESCRIPTION			REF DESIG	QTY REQD PER DASH NUMBER						
						-01	-02	-03	-04	-05	-06	
125												
126												
127												
128												
129												
130	474-500	SCREW, MACH, PAN HD, XREC, 4-40 X .312 LG (ASSEM.WSHR)								7	7	
131	283-105	SPACER, PLAIN, .140 I.D., .125 LG.				1	1	1	1	1	1	
132	471-062	SCREW, MACH., 4-40 X .375 LG.				1	1	1	1	1	1	
133	473-325	SCREW, MACH., 4-40 X .312 LG.				7	7	7	7	-	-	
134	501-169	WASHER, PLAIN, #4				7	7	7	7	-	-	
135	502-002	WASHER, HELICAL SPRING, #4				1	1	1	1	1	1	

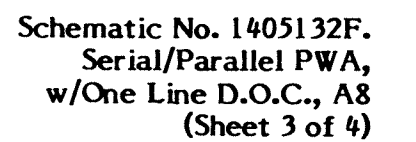


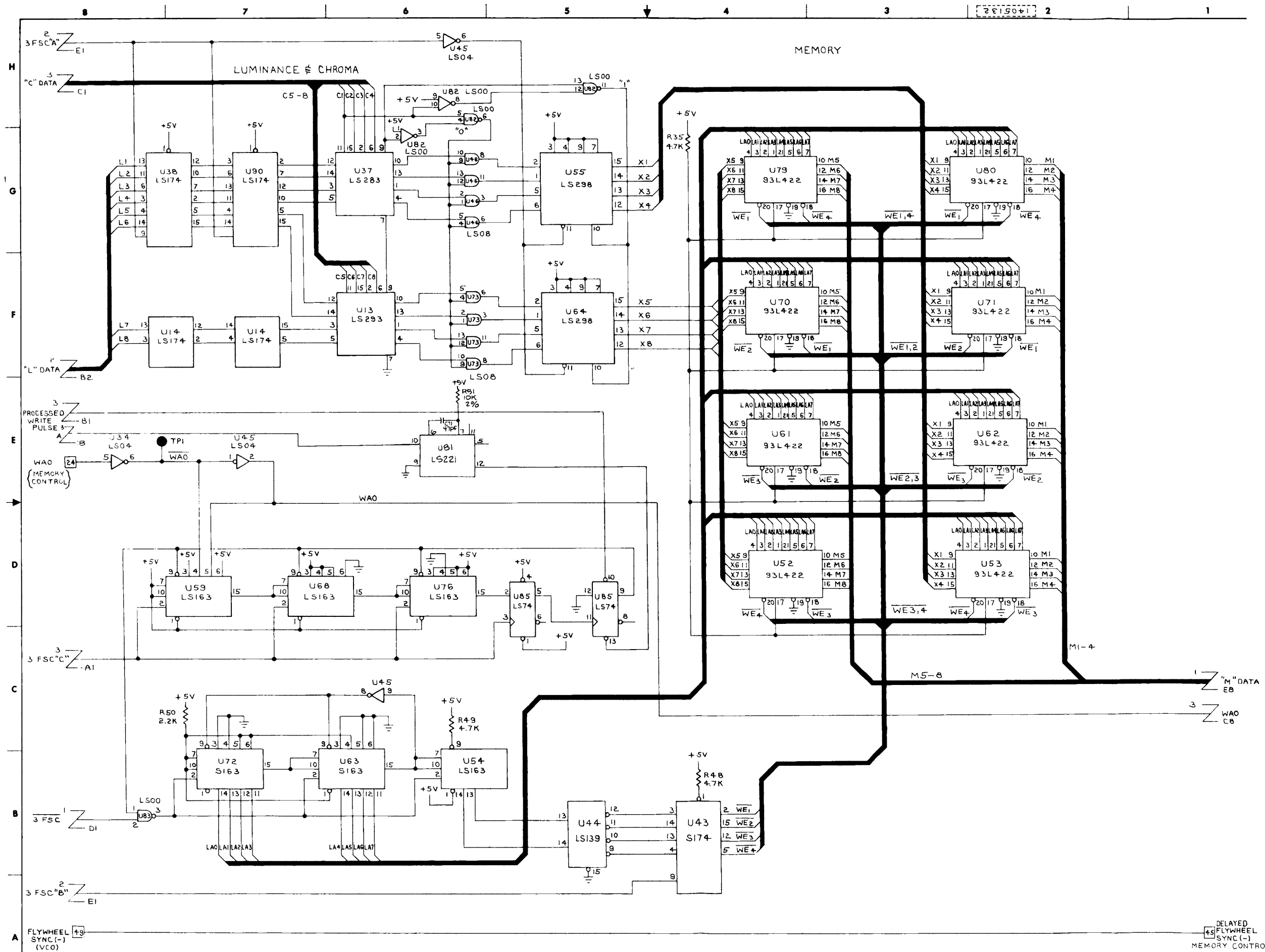
Assembly No. 1409140-06P. Serial/Parallel Converter PWA, w/One Line D.O.C., A8



Schematic No. 1405132F.
Serial/Parallel PWA,
w/One Line D.O.C., A8
(Sheet 1 of 4)

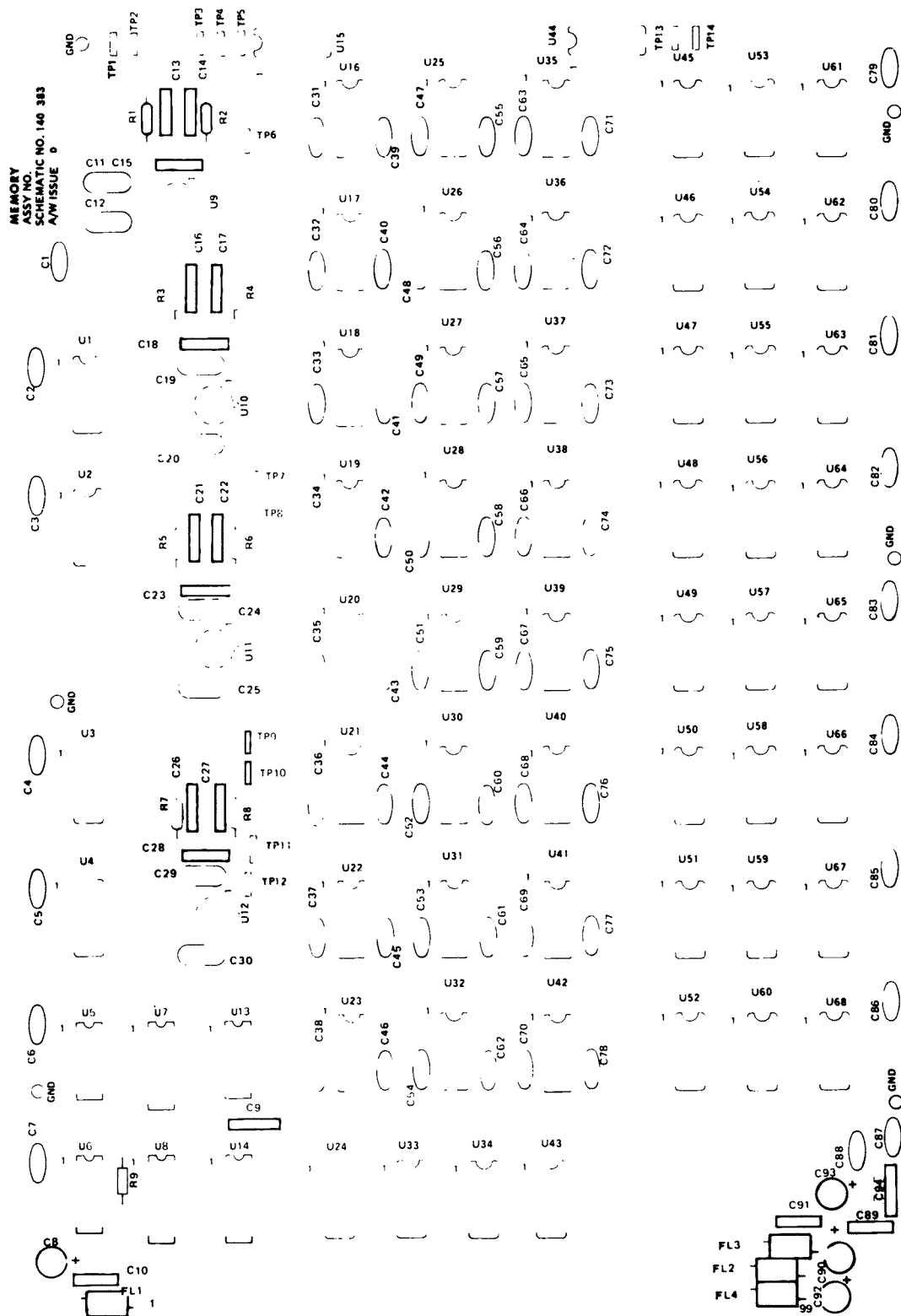




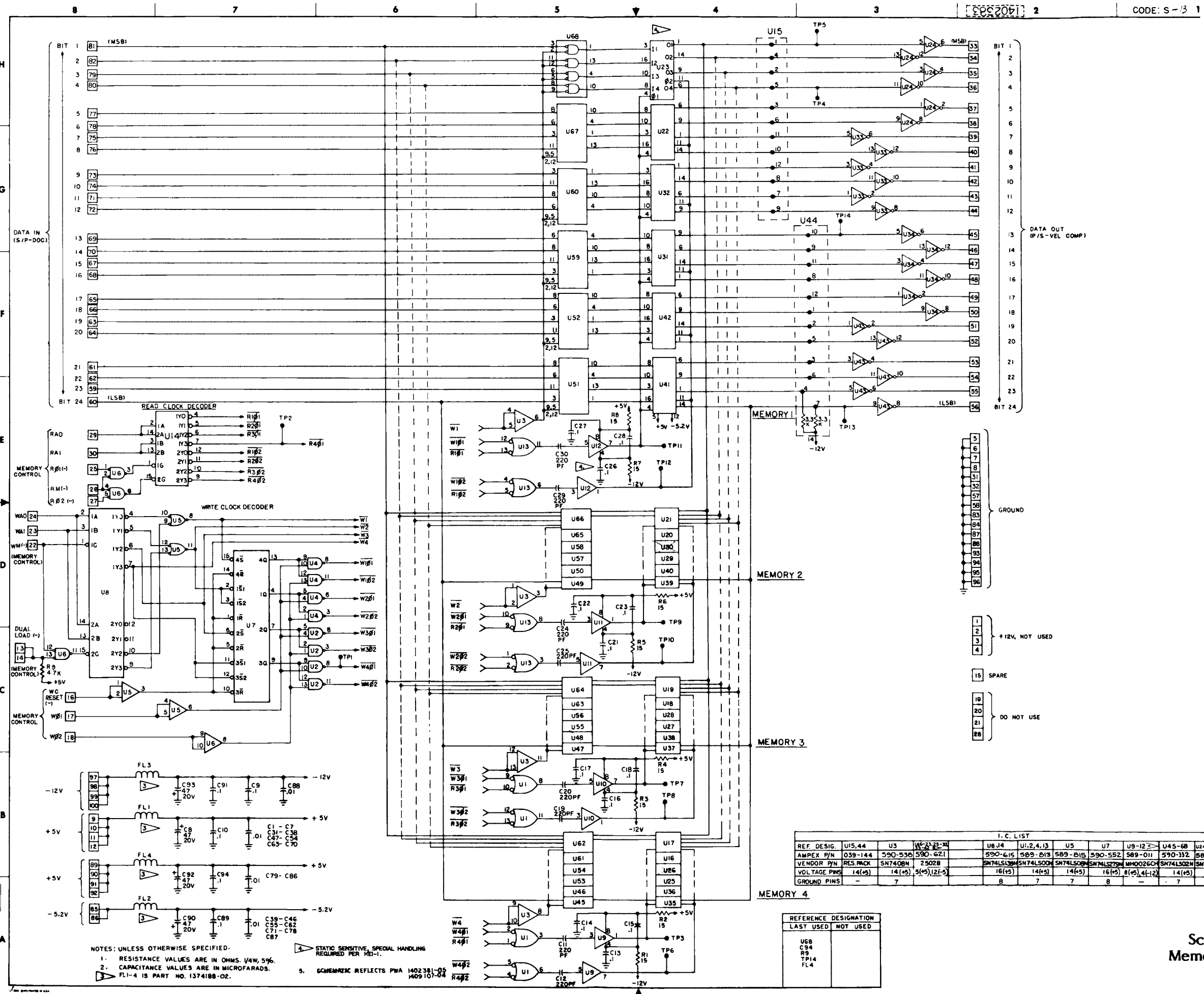


Schematic No. 1405132F.
Serial/Parallel PWA,
w/One Line D.O.C., A8
(Sheet 4 of 4)

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01	-02	-03	-04						
1													
2													
3	1402383	SCHEMATIC			E	F	G						
4													
5	051-770	INDUCTOR, FILTER	FL1-4		4	4	4						
6	1402331-BE	LABEL, MODULE				1	1						
7	1402332-01	EXTRACTOR ARM				1	1						
8	1402333-AA	SHIELD, P.W.B.				1	1						
9	1402474-01	INTEGRATED CIRCUIT, SELECTED	U45-68										
10	590-332	INTEGRATED CIRCUIT, SN74LS02N, PRESTRESSED	U45-68		24	24	24						
11	064-116	CAPACITOR, CER., DISC., .01uF, 50V, -20% +80%	C1-7, 31-88		5	5							
12	030-095	CAPACITOR, CER., MONO., .1uF, 25V, -20%	C9, 10, 13-18, 21-23, 26-28, 89, 91, 94		1	1							
13	064-652	CAPACITOR, MONO., .01uF, 50V, ±20%	C1-7, 31-88			65	65						
14	034-240	CAPACITOR, MICA, 220pF, 500V, 5%	C11, 12, 19, 20, 24, 25, 29, 30		8	8	8						
15	064-653	CAPACITOR, MONO., .1uF, 50V, ±20%	C9, 10, 13-18, 21-23, 26-28, 89, 91, 94			17	17						
16	037-892	CAPACITOR, TANT, .47uF, 20V, 20%	C8, 90, 92, 93		4	4	4						
17													
18	590-538	INTEGRATED CIRCUIT, SN7408N, PRESTRESSED	U3		1	1	1						
19	590-621	N2502B, PRESTRESSED	U16-23, 25-32, 35-42		24	24	24						
20	590-615	SN74LS139N, PRESTRESSED	U8, 14		2	2	2						
21	589-813	SN74LS00N, PRESTRESSED	U1, 2, 4, 13		4	4	4						
22	590-328	SN74LS32N, PRESTRESSED	U6		1	1	1						
23	589-815	SN74LS08N, PRESTRESSED	U5		1	1	1						
24	590-552	SN74LS279N, PRESTRESSED	U7		1	1	1						
25	589-929	SN74LS05N, PRESTRESSED	U24, 33, 34, 43		4	4	4						
26	589-011	INTEGRATED CIRCUIT, MH0026CH	U9-12		4	4	4						
27													
28	066-935	RESISTOR, FIXED, CF, 15 OHM, 1/4W, 5%	R1-8		8	8	8						
29													
30	066-668	RESISTOR, FIXED, C.F., .4.7K, 1/4W, 5%	R9		1	1	1						
31	039-144	NETWORK RESISTOR, 14 PIN, 3.3K OHM, ±2%	U15, 44		2	2	2						
32													
33	187-259	TERMINAL P.C. TEST POINT	TPI-14		14	14	14						
34	474-500	SCREW, MACH, PAN HD, 4-40 X .312 LG, XREC (ASSEM. WSHR)			7	7	7						
35	473-325	SCREW, MACH, ASSD. WASHER, 4-40X, .312 LG.											
36	471-062	SCREW, MACH, PAN HD., XREC., 4-40X, .375 LG.			1	1	1						

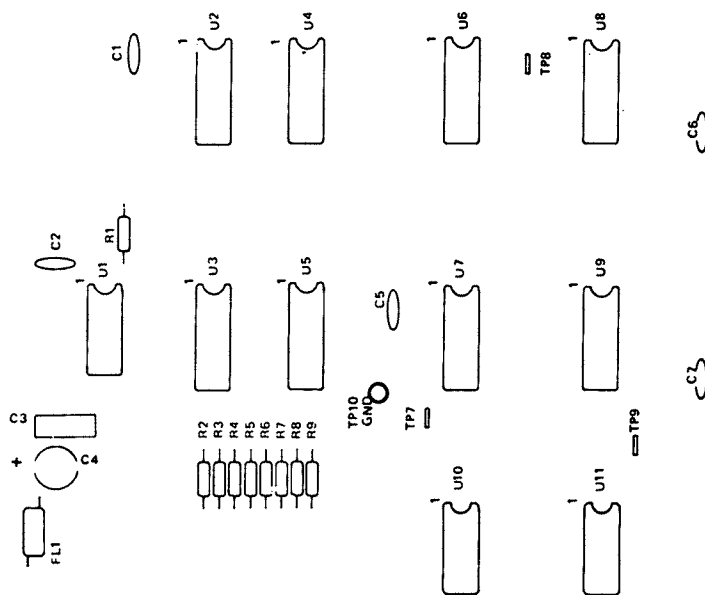


Assembly No. 1409107-04K. Memory PWA, A9, A10, A11



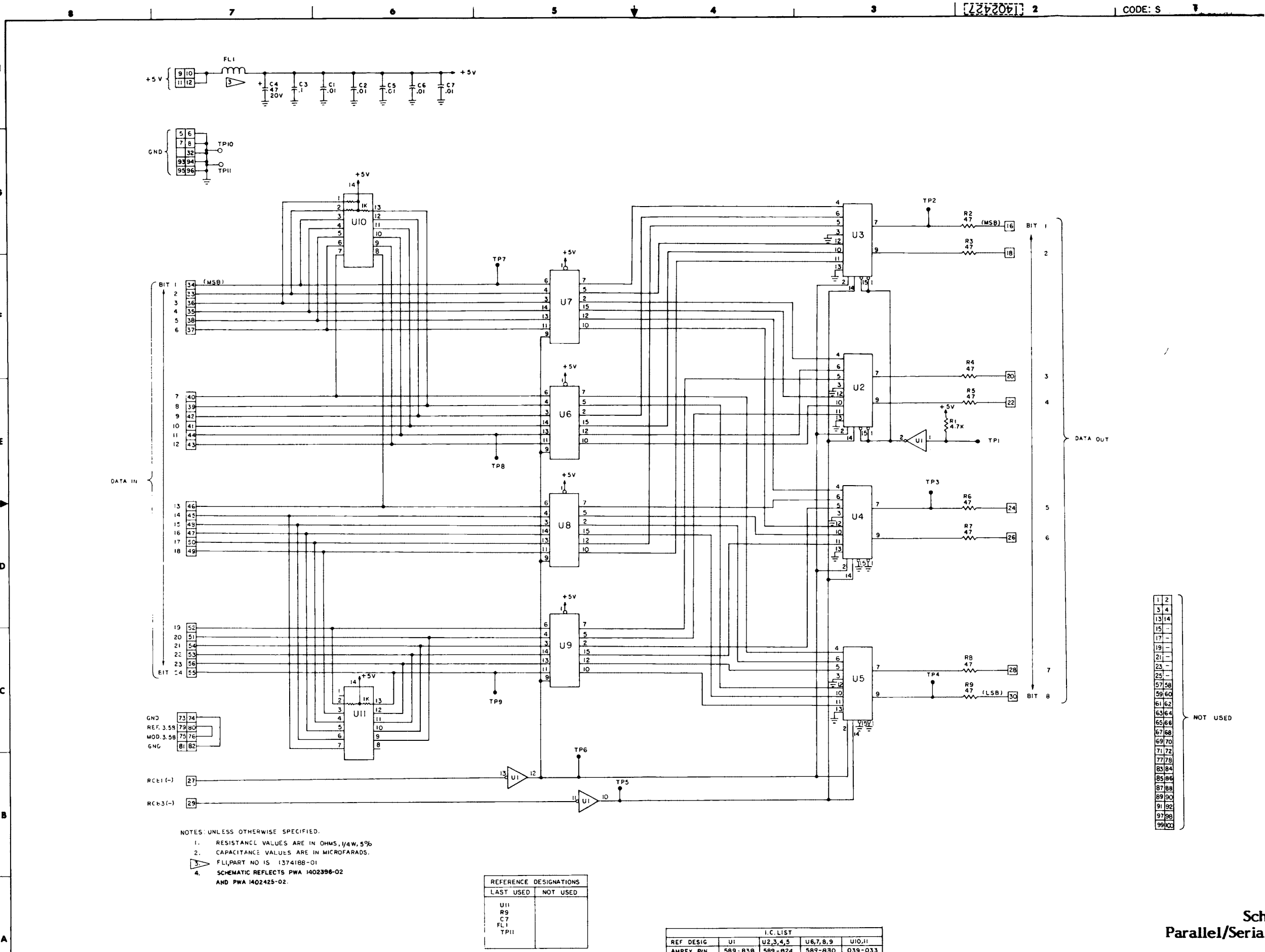
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PWA TITLE: P/S CONVERTER
 ASSY NO: J-111
 AW ISS: J-111
 SCH NO: 1402427



























TP1
 TP2
 TP3
 TP4
 TP5
 TP6
 TP8
 TP9
 TP11
 GND

Assembly No. 1402396-02F. Parallel/Serial Converter PWA, A13



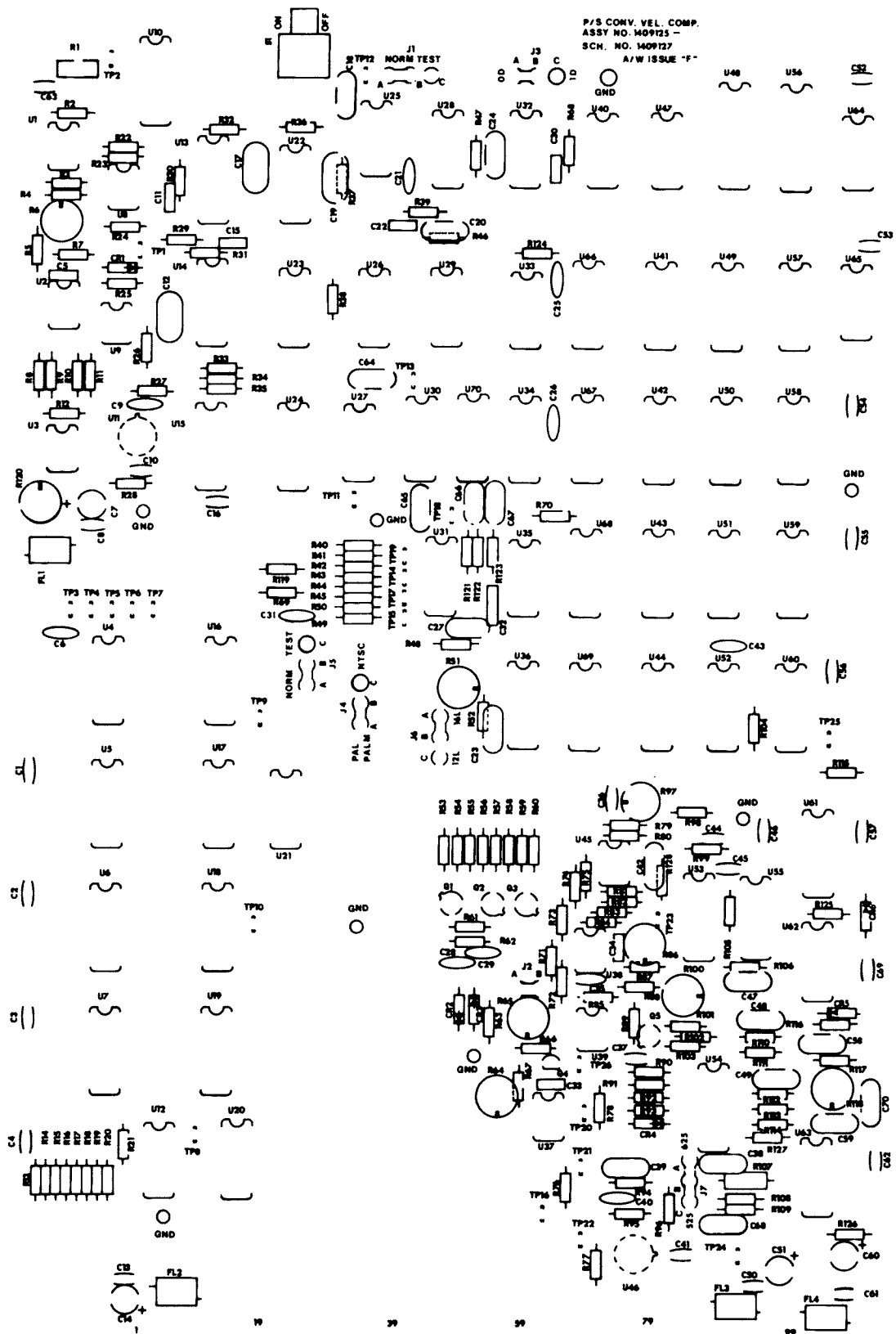
Schematic No. 1402427E.
 Parallel/Serial Converter PWA, A13

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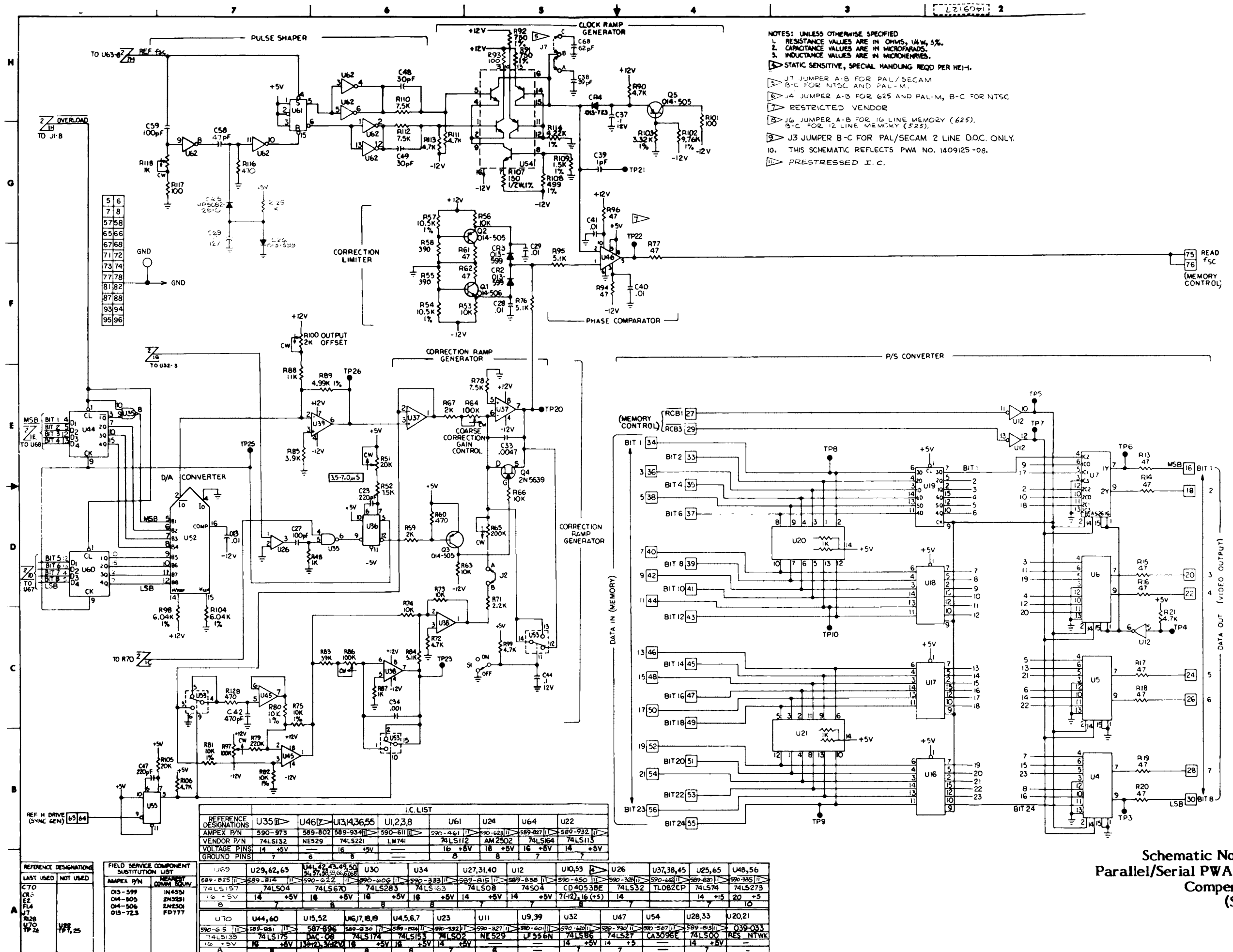
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1409125	SHEET 2		RFV P			
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER								
				-01	-02	-03	-04	-05	-06	-07	-08	
36	069-090	CAPACITOR, MYLAR, .001uF, 50V, 5% C11,22,34		3	3	3	3	3	3	3	3	
37												
38	069-103	CAPACITOR, MYLAR, .0047uF, 50V, 5% C5,33		2	2	2	2	2	2	2	2	
39	069-107	CAPACITOR, MYLAR, .0033uF, 50V, 5% C15		1	1	1		1		1	1	
40	069-092	CAPACITOR, MYLAR, .047uF, 50V, 5% C32		1	1	1		1		1	1	
41	069-106	CAPACITOR, MYLAR, .0027uF, 50V, 5% C30		1	1	1		1		1	1	
42												
43	037-892	CAPACITOR, TANT, 47uF, 20%, 20V C7,14,51,60		4	4	4	4	4	4	4	4	
44												
45												
46	013-599	DIODE, SWITCHING, CD458, 1N4531 CR1,2,3,6			4	4	4	4	4	4	4	
47	013-599	DIODE, SWITCHING, CD458 CR1,2,3		3	-	-	-	-	-	-	-	
48	581-079	DIODE, SCHOTTKY, HP5082-2810 CR5		-	1	1		1		1	1	
49	013-723	DIODE FD777 CR4		1	1	1		1		1	1	
50												
51	590-611	I.C., 741  2 U1,2,3,8		4	4	4	4	4	4	4	4	
52	590-327	I.C., NE529H  2 U11		1	1	1		1		1	1	
53	590-567	I.C., CA3096E  2 U54		1	1	1		1		1	1	
54	590-450	I.C., CD4053BE  1  2 U10,53		2	2	2	2	2	2	2	2	
55	590-602	I.C., TL082CP  2 U37,38,45		3	3	3	3	3	3	3	3	
56	590-601	I.C., LF356N  2 U9,39		2	2	2	2	2	2	2	2	
57	589-802	I.C., NE529H (RESTRICTED VENDOR) U46		1	1	1		1		1	1	
58												
59	590-623	I.C., AM2502PC  2 U24		1	1	1		1		1	1	
60	587-896	I.C., DAC-08CQ U15,52		2	2	2	2	2	2	2	2	
61												
62	590-973	I.C., 74LS132,  2 U35									1	
63	589-813	I.C., 74LS00  2 U28,U33									2	
64	589-838	I.C., 74S04  2 U12		1	1	1	1	1	1	1	1	
65	589-820	I.C., 74LS74  2 U25,65		2	2	2	2	2	2	2	2	
66	589-813	I.C., 74LS00  2 U28,33,35		3	3	3	3	3	3	3	3	
67	590-328	I.C., 74LS32  2 U26		1	1	1	1	1	1	1	1	
68	589-814	I.C., 74LS04  2 U29,62,63		3	3	3	3	3	3	3	3	
69	589-815	I.C., 74LS08  2 U27,31,40		3	3	3	3	3	3	3	3	
70	590-333	I.C., 74LS163  2 U34		1	1	1	1	1	1	1	1	
71	589-934	I.C., 74LS221  2 U13,14,36,55		4	4	4	4	4	4	4	4	
72	590-622	I.C., 74LS670  2 U41-43,49-51,57-59,66-68		12	12	12	12	12	12	12	12	
73	590-620	I.C., 74LS86  2 U32		1	1	1	1	1	1	1	1	
74	590-332	I.C., 74LS02  2 U23		1	1	1	1	1	1	1	1	
75	589-831	I.C., 74LS175  2 U44,60		2	2	2	2	2	2	2	2	
76	589-830	I.C., 74LS174  2 U16-19		4	4	4	4	4	4	4	4	
77	590-461	I.C., 74LS112  2 U61		1	1	1	1	1	1	1	1	
78	589-932	I.C., 74LS113 2 U22		1	1	1	1	1	1	1	1	
79	589-824	I.C., 74LS153 2 U4-7		4	4	4	4	4	4	4	4	
80	590-606	I.C., 74LS283 2 U30		1	1	1	1	1	1	1	1	

AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1409125		SHEET 3		REV. 1F			
ITEM NO.	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER								
					-01	-02	-03	-04	-05	-06	-07	-08	
81	589-827	I.C., 74LS164	2	U64		1	1	1	1		1	1	
82	589-930	I.C., 74LS27	2	U47		1	1	1	1		1	1	
83	590-335	I.C., 74LS273	2	U48,56	2	2	2	2	2	2	2	2	
84	590-615	I.C., 74LS139	2	U70		1	1	1	1	1	1	1	
85	589-825	I.C., 74LS157	2	U69		1	1	1	1		1	1	
86													
87													
88	062-622	RESISTOR, FIXED, M.F., 953 OHMS, 1/4W, 1%		R8		1	1	1	1	1	1	1	
89													
90	062-624	RESISTOR, FIXED, M.F., 1K OHMS, 1/4W, 1%		R12		1	1	1	1	1	1	1	
91	062-902	RESISTOR, FIXED, M.F., 499 OHMS, 1/4W, 1%		R2,108	2	2	2	2	2	2	2	2	2
92	062-916	RESISTOR, FIXED, M.F., 750 OHMS, 1/4W, 1%		R91,92	2	2	2	2	2	2	2	2	2
93	062-932	RESISTOR, FIXED, M.F., 1.5K OHMS, 1/4W, 1%		R109		1	1	1	1	1	1	1	1
94	062-693	RESISTOR, FIXED, M.F., 20K OHMS, 1/4W, 1%		R119		1	1	1	1	1	1	1	1
95	062-955	RESISTOR, FIXED, M.F., 3.32K OHMS, 1/4W, 1%		R103		1	1	1	1	1	1	1	1
96	062-962	RESISTOR, FIXED, M.F., 4.02K OHMS, 1/4W, 1%		R59		1	1	1	1	1	1	1	1
97	062-968	RESISTOR, FIXED, M.F., 4.99K OHMS, 1/4W, 1%		R26,89	2	2	2	2	2	2	2	2	2
98	062-983	RESISTOR, FIXED, M.F., 10K OHMS, 1/4W, 1%		R10,22-24,75,80-82	8	8	8	8	8	8	8	8	8
99	066-012	RESISTOR, FIXED, M.F., 40.2K OHMS, 1/4W, 1%		R25		1	1	1	1	1	1	1	1
100	066-160	RESISTOR, FIXED, M.F., 6.04K OHMS, 1/4W, 1%		R34,35,98,104	4	4	4	4	4	4	4	4	4
101	066-389	RESISTOR, FIXED, M.F., 90.9K OHMS, 1/4W, 1%		R7		1	1	1	1	1	1	1	1
102	066-442	RESISTOR, FIXED, M.F., 10.5K OHMS, 1/4W, 1%		R54,57	2	2	2	2	2	2	2	2	2
103	066-512	RESISTOR, FIXED, M.F., 4.27K OHMS, 1/4W, 1%		R114		1	1	1	1	1	1	1	1
104	066-802	RESISTOR, FIXED, M.F., 9.76K OHMS, 1/4W, 1%		R102		1	1	1	1	1	1	1	1
105													
106	066-665	RESISTOR, FIXED, C.F., 1K OHMS, 1/4W, 5%		R36,37,39,46-48,68,87,122,123,125,127									
107	066-824	RESISTOR, FIXED, C.F., 1.5K OHMS, 1/4W, 5%		R52						1	1	1	1
108	066-665	RESISTOR, FIXED, C.F., 1K OHMS, 1/4W, 5%		R36,37,39,46-48,68,87,121-123,125,127						13	13	13	-
109													
110	066-830	RESISTOR, FIXED, C.F., 10K OHMS, 1/4W, 5%		R4,33,53,56,63,66,73,74,126,137,46,47,48,68,87,125,121,122,123	10	10							
111	066-665	RESISTOR, FIXED, C.F., 1K OHMS, 1/4W, 5%		R21,29,38,40-45,49,50,72,113,115,124	10	10							
112	066-666	RESISTOR, FIXED, C.F., 4.7K OHMS, 1/4W, 5%		R21,29,38,40-45,49,50,72,113,115,124	10	10	10	10	10	10	10	10	10
113	066-815	RESISTOR, FIXED, C.F., 300 OHMS, 1/4W, 5%		R52									
114	066-689	RESISTOR, FIXED, C.F., 2.2K OHMS, 1/4W, 5%		R3,71	2	2	2	2	2	2	2	2	2
115	066-711	RESISTOR, FIXED, C.F., 7.5K OHMS, 1/4W, 5%		R9,11,78,110,112	5	5	5	5	5	5	5	5	5
116	066-812	RESISTOR, FIXED, C.F., 100 OHMS, 1/4W, 5%		R70,93,101,117	4	4	4	4	4	4	4	4	4
117	066-815	RESISTOR, FIXED, C.F., 300 OHMS, 1/4W, 5%		R36,39,52	3	3							
118	066-826	RESISTOR, FIXED, C.F., 2K OHMS, 1/4W, 5%		R59,60,67	3	3	3	3	3				
119	066-827	RESISTOR, FIXED, C.F., 3.9K OHMS, 1/4W, 5%		R85	1	1			1	1	1	1	1
120	066-830	RESISTOR, FIXED, C.F., 10K OHMS, 1/4W, 5%		R4,33,53,56,63,66,73,74	8	8							
121	066-831	RESISTOR, FIXED, C.F., 11K OHMS, 1/4W, 5%		R88	1	1			1	1	1	1	1
122	066-842	RESISTOR, FIXED, C.F., 5.1K OHMS, 1/4W, 5%		R76,84,95	3	3	3	3	3	3	3	3	3
123	066-856	RESISTOR, FIXED, C.F., 15K OHMS, 1/4W, 5%		R31	1	1			1	1	1	1	1
124	066-860	RESISTOR, FIXED, C.F., 39K OHMS, 1/4W, 5%		R83	1	1			1	1	1	1	1

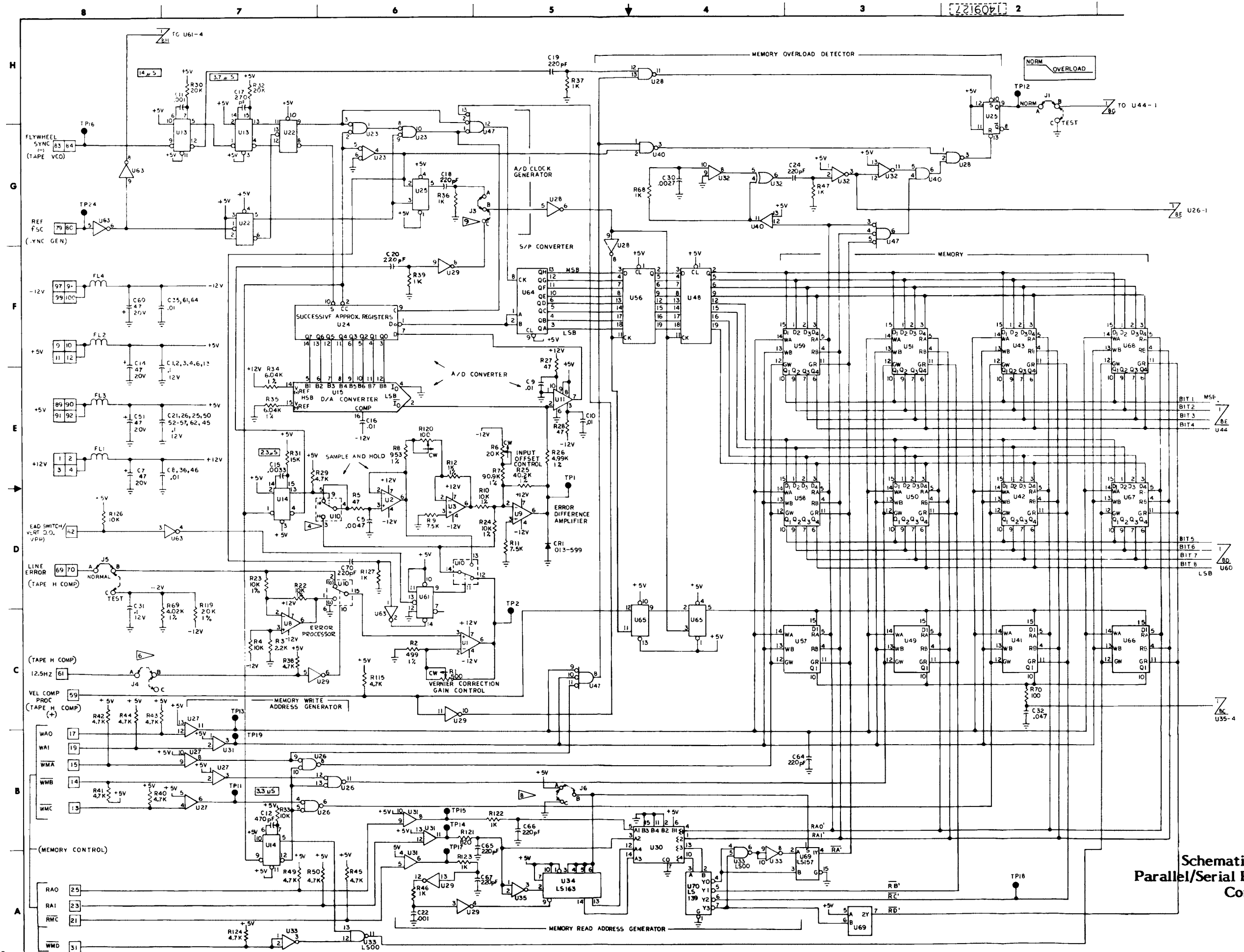
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1409125	SHEET 4		P		
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIGN	QTY REQD PER DASH NUMBER							
				-01	-02	-03	-04	-05	-06	-07	-08
125	066-873	RESISTOR, FIXED, C.F., 20K OHMS, 1/4W, 5% R30,32,105		3	3	3	3	3	3	3	3
126	066-913	RESISTOR, FIXED, C.F., 220K OHMS, 1/4W, 5% R79		1	1	1	1	1	1	1	1
127	066-938	RESISTOR, FIXED, C.F., 47 OHMS, 1/4W, 5% R5,13-20,27,28,61,62,77,94,96		16	16	16	16	16	16	16	16
128	066-816	RESISTOR, FIXED, C.F., 390 OHMS, 1/4W, 5% R55,58		2	2	2	2	2	2	2	2
129	066-818	RESISTOR, FIXED, C.F. 470 OHMS, 1/4W, 5% R116		1	-	-	-	-	-	-	-
130	066-818	RESISTOR, FIXED, C.F. 470 OHMS, 1/4W, 5% R116,128		-	2	2	2	-	-	-	-
131	066-821	RESISTOR, FIXED, C.F., 820 OHMS, 1/4W, 5% R121		-	-	-	-	-	-	1	-
132											
133	048-625	RESISTOR, FIXED, M.F., 150 OHMS, 1/2W, 1% R107		1	1	1	1	1	1	1	1
134											
135	058-990	RESISTOR, VARIABLE, 100 OHMS, 1/2W R120		1	1	1	1	1	1	1	1
136	058-994	RESISTOR, VARIABLE, CERMET, 1K OHMS, 1/2W, R118		1	1	1	1	1	1	1	1
137	058-995	RESISTOR, VARIABLE, CERMET, 2K OHMS, 1/2W R100		1	1	1	1	1	1	1	1
138	058-997	RESISTOR, VARIABLE, CERMET, 5K OHMS, 1/2W R51		1	1	1	-	-	-	-	-
139	058-999	RESISTOR, VARIABLE, CERMET, 20K OHMS, 1/2W R6		1	1	1	-	-	-	-	-
140	075-003	RESISTOR, VARIABLE, CERMET, 100K OHMS, 1/2W R64,86,97		3	3	3	3	3	3	3	3
141	075-004	RESISTOR, VARIABLE, CERMET, 200K OHMS, 1/2W R65		1	1	1	1	1	1	1	1
142	075-210	RESISTOR, VARIABLE, CERMET, 500 OHMS, 1/2W R1		1	1	1	1	1	1	1	1
143	058-999	RESISTOR, VARIABLE, CERMET, 20K OHMS, 1/2W, R6,51		-	-	-	2	2	2	2	2
144											
145											
146	039-033	RESISTOR, NETWORK, 1K OHMS, U20,21		2	2	2	2	2	2	2	2
147											
148											
149	119-279	SWITCH, TOGGLE, DPDT S1		1	1	1	1	1	1	1	1
150											
151	280-130	MOUNTING PAD, TRANSISTOR, TQ-18 REF: Q1-3,5		4	4	4	4	4	4	4	4
152											
153											
154	014-505	TRANSISTOR, CD445, 2N3251 Q2,3,5		3	3	3	3	3	3	3	3
155	014-506	TRANSISTOR, CD446, 2N2501 Q1		1	1	1	1	1	1	1	1
156	580-453	TRANSISTOR, 2N5639 Q4		1	1	1	1	1	1	1	1
157											
158											
159											
160	187-259	TERMINAL, P.C., TEST POINT TP1-26		26	26	6	6	6	6	6	6
161											
162											
163	143-981	CONNECTOR, JACK, P.C. REF: J1-7		20	20	20	20	20	20	20	20
164	602-044	PLUG, SHORTING, RED J1-7		7	7	7	7	7	7	7	7
165											
166											
167											
168	283-105	SPACER, UNTHREADED, PLAIN		1	1	1	1	1	1	1	1
169	471-062	SCREW, MACH., PAN HD., 4-40 X .375 LG		1	1	1	1	1	1	1	1



Assembly No. 1409125-08P. Parallel/Serial Converter PWA,
w/Velocitv Compensation, A13



Schematic No. 1409127H.
Parallel/Serial PWA, w/Velosity
Compensation, A13
(Sheet 1 of 2)



Schematic No. 1409127H.
Parallel/Serial PWA, w/Velocity
Compensation, A13
(Sheet 2 of 2)

ITEM NO	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER													
				C1	D2	D3	D4										
1				Q1	05	05											
2	1405191	SCHEMATIC		(-)	C	D	J										
3	1402332-01	EXTRACTOR ARM		1	1	1	1										
4	1402333-AA	SHIELD		1	1	1	1										
5	1402331-AP	LABEL MODULE		1	1	1	1										
6	473-325	SCREW, MACH, PAN HD, WASHER, 4-40 X .312 LG		7	7	7	-										
7	501-169	WASHER, PLAIN #4		7	7	7	-										
8	471-062	SCREW, MACH, PAN HD, XREC, 4-40 X .375 LG		1	1	1	1										
9	1374106-01	TRANSFORMER, TOROID	T1	1	1	1	1										
10	1374371-AJ	INDUCTOR, VAR, 2.6 uH	L11	1	1	1	1										
11	1374371-AG	INDUCTOR, VAR, 3.9 uH	L12	1	1	1	1										
12	1374371-AD	INDUCTOR, VAR, 6.96 uH	L10	1	1	1	1										
13	1374371-AC	INDUCTOR, VAR, 7.83 uH	L9	1	1	1	1										
14	1374371-AA	INDUCTOR, VAR, 10.3 uH	L8	1	1	1	1										
15	1374388-AS	INDUCTOR, VAR, 22 uH	L4	1	1	1	1										
16	1374388-AW	INDUCTOR, VAR, 47 uH	L13	1	1	1	1										
17	1374388-AY	INDUCTOR, VAR, 68 uH	L5	1	1	1	1										
18	1374191-C3	TRANSFORMER, VAR, 30.1 uH	T3	1	1	1	1										
19	1374191-01	TRANSFORMER, VAR, 45.7 uH	T2	1	1	1	1										
20	013-166	DIODE, ZENER, CD32, 3.3V, 1N715A	VR1	1	1	1	1										
21	013-332	DIODE, ZENER, CD32, 4.7V, 1N750A	VR4	1	1	1	1										
22	013-257	DIODE, ZENER, CD32, 6.2V, 1N753A	VR3	1	1	1	1										
23	013-383	DIODE, ZENER, CD32, 9.1V, 1N757A	VR2	1	1	1	1										
24	013-371	DIODE, ZENER, CD32, 13V, 1N964B	VR5	1	1	1	1										
25	013-830	DIODE, ZENER, CD32, 16V, 1N966B	VR6,7	2	2	2	2										
26	013-723	DIODE, FD777	CR5-20	16	16	16	16										
27	581-247	DIODE, MATCHED QUAD (4 IN 1 SET) HP5082-2970	CR1-4	1	1	1	1										
28																	
29																	
30	014-247	TRANSISTOR, CD38, 2N2219	Q9	1	1	1	1										
31	014-505	TRANSISTOR, CD445, 2N3251	Q1,7,8,10-12,15,16,19,20,23,24,27,28,31,32,35,36,39,40,43,44,49,54,56,58,60,67,73,74,75,77,79-81,83,85,86,87,88	40	40	40	40										
32	014-506	TRANSISTOR, CD446, 2N2501	Q3,4,45,61,76,78,82,84	9	9	9	9										
33	014-581	TRANSISTOR, CD6150	Q2,50-53,55,59,62-66,68-72	17	17	17	17										
34	580-133	TRANSISTOR, 2N4093, FET	Q57	1	1	1	1										
35	580-226	TRANSISTOR, 2N4124	Q13,14,17,18,21,22,25,26,29,30,33,34,37,38,41,42	16	16	16	16										
36	580-471	TRANSISTOR, 2N5484, FET	Q48	1	1	1	1										

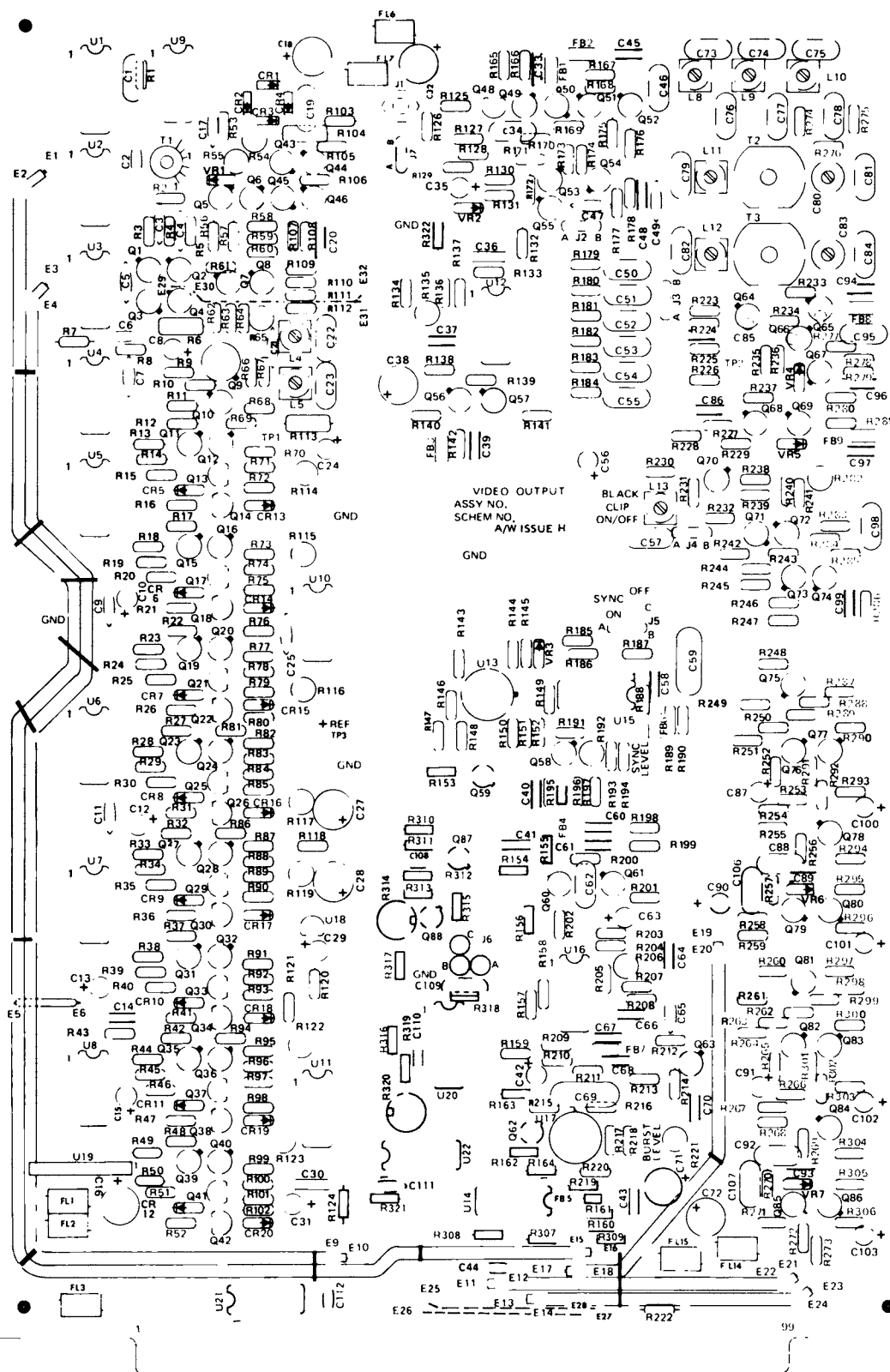
AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405189	SHEET 2	V
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER				
				-01	-02	-03	-04	
37	580-511	TRANSISTOR, 2N5841	Q5,6	2	2	2	2	
38								
39	064-492	CAPACITOR, CER, .1uF, 12V	C111,112	2	2	2	2	
40	064-116	CAPACITOR, CER, 0.01uF, 50V,	C2-7,9,11,17,21,25, 44,47,49,65,108	16	16	16	16	
41	030-095	CAPACITOR, CER, MONO, 0.1uF, 25V, 20%	C14,20,33,37,39,40, 41,43,45,48,58,60, 61,64,66,67,68,70, 85,86,89,93,94,96, 97,99	26	26	26	26	
42	030-223	CAPACITOR, CER, MONO, 2.2uF, 25V, 20%	C30,36	2	2	2	2	
43								
44	069-097	CAPACITOR, POLY .022uF, 50V, 5%	C110	1	1	1	1	
45	037-054	CAPACITOR, TANT, 22uF, 15V, 20%	C8,10,12,13,15,24, 29,31,35,42,56,63, 87,90,91,100,101, 102,103	19	19	19	19	
46	037-832	CAPACITOR, TANT, 47uF, 20V, 20%	C16,18,32,38,71,72	6	6	6	6	
47	037-973	CAPACITOR, TANT, 330uF, 6V, 20%	C27,28	2	2	2	2	
48								
49								
50	034-345	CAPACITOR, MICA, 3pF, 500V ± 0.5pF	C34	1	1	1	1	
51	056-388	8.2pF	C52	1	1	1	1	
52	056-580	12pF	C54	1	1	1	1	
53	034-759	15pF	C73	1	1	1	1	
54	056-140	20pF	C81	1	1	1	1	
55	034-350	24pF	C53	1	1	1	1	
56	034-688	30pF	C55,84	2	2	2	2	
57	034-376	33pF	C78	1	1	1	1	
58	056-601	47pF	C22	1	1	1	1	
59	034-156	5pF ± 0.5pF	C106,107	2	2	2	2	
60								
61	056-500	59pF 1%	C75	1	1	1	1	
62	034-541	62pF	C46	1	1	1	1	
63	056-407	71pF	C74	1	1	1	1	
64	034-285	75pF	C50	1	1	1	1	
65	034-219	120pF	C77	1	1	1	1	
66	034-239	130pF	C76	1	1	1	1	
67	034-224	160pF	C51	1	1	1	1	
68	034-543	240pF	C23	1	1	1	1	
69	034-241	360pF	C82	1	1	1	1	
70	034-266	1500pF	C59	1	1	1	1	
71	034-243	3000pF, 500V	C69	1	1	1	1	
72	034-250	620pF, 300V 1%	C79	1	1	1	1	
73	034-177	100pF, 500V 5%	C109	1	1	1	1	
74	034-215	10pF, 500V 5%	C62	1	1	1	1	
75	034-943	27pF	C88,92	2	2	2	2	
76	034-180	39pF	C57	1	1	1	1	
77	034-181	47pF	C98	1	1	1	1	
78	034-182	CAPACITOR, MICA, 56pF, 500V, 5%	C19,95	2	2	2	2	

AMPEX		AMPEX CORPORATION REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405189	SHEET 3	REV V
ITEM NO.	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER			
					01	02	03	04
79	056-163		CAPACITOR, MICA, 470pF, 500V, 5% C1		1	1		
80	056-680		CAPACITOR, MICA, 43PF, 500V, 5% C1					1
81								
82	038-275		CAPACITOR, VAR, CER, 5.5-18pF, 350V C80,83		2	2	2	2
83								
84								
85	041-801		RESISTOR, COMP, 22 MEG OHM, 1/4W, 5% R136		1	1		1
86								
87	041-256		RESISTOR, COMP, 560 OHM, 1/2W, 5% R6		1	1		1
88	041-245		RESISTOR, COMP, 1K OHM, 1/2W, 5% R104		1	1		1
89	041-009		RESISTOR, COMP, 1.8K OHM, 1/2W, 5% R113		1	1		1
90								
91								
92	039-222		RESISTOR, NETWORK, 1.5K, 2% U19		1	1		1
93	076-028		RESISTOR, C.F., 5.1 OHM, 1/4W, 5% R7,76,296,306		4	4	4	4
94	066-660		RESISTOR, C.F., 22 OHM, 1/4W, 5% R63,66,69,166,222,249,261,286		8	8	8	8
95	066-855		RESISTOR, C.F., 39 OHM, 1/4W, 5% R257,270		2	2	2	2
96	066-938		RESISTOR, C.F., 47 OHM, 1/4W, 5% R5,10,13-15,18-20,23-25,28-30,33-35,38-40,44-46,49-51,56,57,70,72,73,75,77,78,83,84,88,90,91,93,96,97,99,100,103,105,111,130,131,149,158,169,173,176,177,185,187,188,202,205,211,214,232,238,244,246,252,256,265,269,284,291,292,301,302		75	75	75	75
97	076-045		RESISTOR, C.F., 75 OHM, 1/4W, 5% R120,125,141,240,285		5	5	5	5
98	066-812		100 OHM R9,59,60,64,68,110,173,174,186,191,195,213,234,239,247,248,260,262,289,294,297,304,310,312,313,315		26	26	26	26
99	066-915		110 OHM R277		1	1		1
100	066-813		150 OHM R2,200		2	2		2
101	066-662		200 OHM R3,4,112		3	3	3	3
102	066-663		220 OHM R43		1	1		1
103	066-815		300 OHM R107,108,201		3	3	3	3
104	066-838		330 OHM R8,156,317		3	3	3	3
105	066-872		360 OHM R228		1	1		1
106	066-817		430 OHM R159		1	1		1
107	066-818		470 OHM R243		1	1		1
108	066-664		510 OHM R53		1	1		1
109	066-840		680 OHM R226,245,283		3	3	3	3
110	065-820		750 OHM R154,160		2	2	2	2
111	066-665		1K OHM R118,124,132,140,165,295,305		7	7	7	7
112	066-823		1.1K OHM R129,157,171,172		4	4	4	4
113	066-715		1.2K OHM R12,27,287,298		4	4	4	4
114	066-675		1.8K OHM R109,136,183,225		4	4	4	4
115	066-826		2K OHM R1,106,152,181,196,241		6	6		
116	066-689		RESISTOR, C.F., 2.2K OHM, 1/4W, 5% R178,212,224,230,279,303,316		7	7	7	7

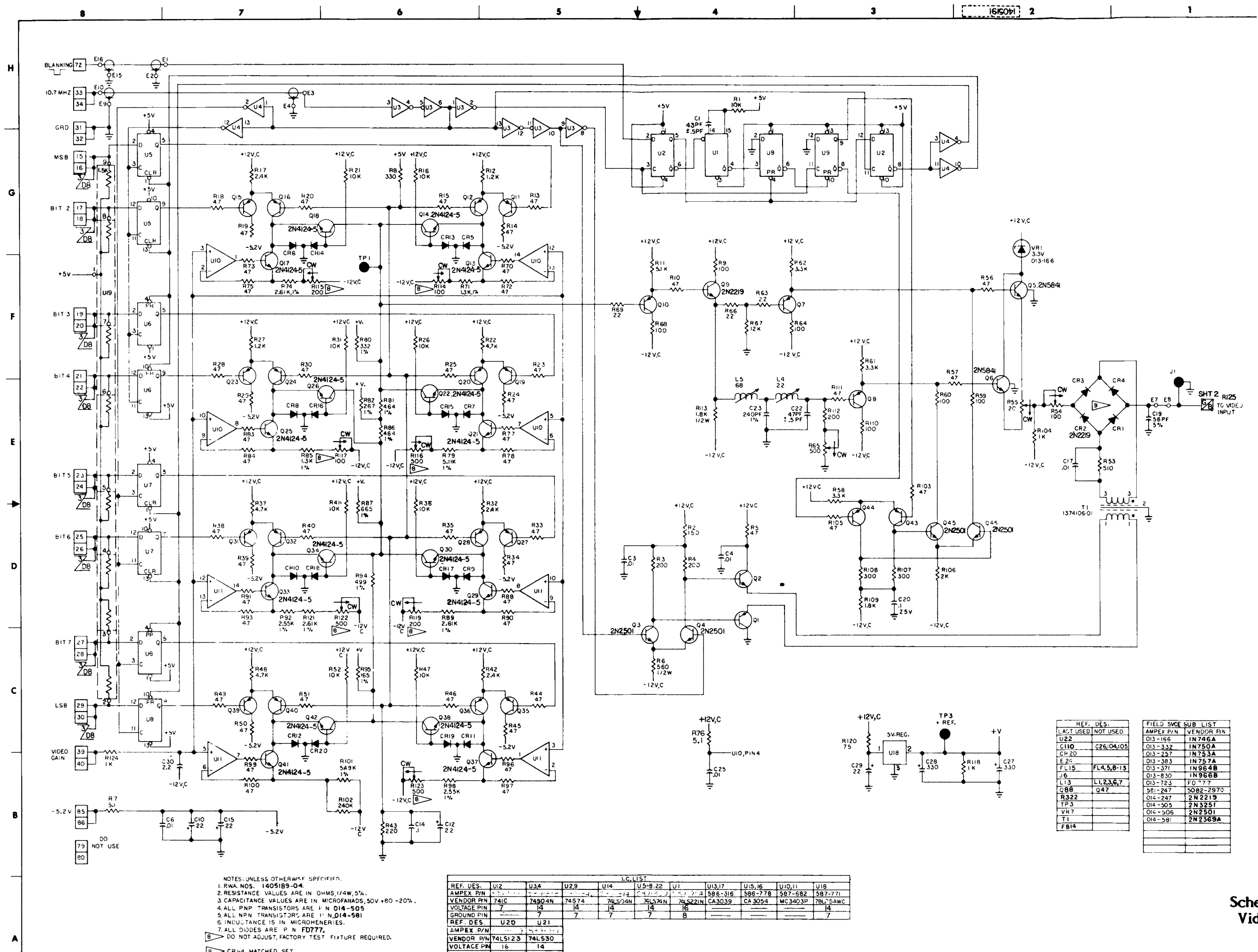
AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405189	SHEET 4	REV Y									
ITEM NO	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER													
				-01	-02	-03	-04										
117	066-928	RESISTOR, C.F., 2.4K OHM, 1/4W, 5%	R17,32,42,127	4	4	4	4										
118	066-720	3.3K OHM	R58,61,62	3	3	3	3										
119	066-863	3.6K OHM	R255,266	2	2	2	2										
120	066-827	3.9K OHM	R242	1	1	1	1										
121	066-668	4.7K OHM	R22,37,49,203,321	5	5	5	5										
122	066-842	5.1K OHM	R11,278,307,309	4	4	4	4										
123	066-843	6.2K OHM	R140,145,255,268	4	4	4	4										
124	066-669	8.2K OHM	R182	1	1	1	1										
125	066-830	10K OHM	R16,21,26,31,36,41,47,52,134,138	10	10	-	-										
126	066-865	12K OHM	R67,155,161,311	4	4	4	4										
127	066-873	20K OHM	R139,184	2	2	2	2										
128	066-845	24K OHM	R137,237	2	2	2	2										
129	066-850	240K OHM	R102	1	1	1	1										
130	066-673	1 MEG OHM	R133	1	1	1	1										
131	066-712	22K OHM	R318	1	1	1	1										
132				-	-												
133	066-974	RESISTOR, C.F., 150K OHM, 1/4W, 5%	R322	1	1	1	1										
134	066-874	RESISTOR, M.F., 16.2 OHM, 1/4W, 1%	R179	1	1	1	1										
135	076-117	18.2 OHM	P180	1	1	1	1										
136	062-821	49.9 OHM	R175	1	1	1	1										
137	062-831	68.1 OHM	R198,199	2	2	2	2										
138	062-833	71.5 OHM	R146,151,218,219	4	4	4	4										
139	062-836	75 OHM	R251,259,264,272,273	5	5	5	5										
140	062-847	100 OHM	R275,288,299	3	3	3	3										
141	062-864	150 OHM	R208	1	1	1	1										
142	062-866	162 OHM	R236	1	1	1	1										
143	062-867	165 OHM	R95	1	1	1	1										
144	062-881	261 OHM	R227	1	1	1	1										
145	057-847	267 OHM	R82	1	1	1	1										
146	066-170	280 OHM	R233	1	1	1	1										
147	062-883	287 OHM	R128	1	1	1	1										
148	062-884	301 OHM	R235	1	1	1	1										
149	062-887	332 OHM	R80	1	1	1	1										
150	062-894	402 OHM	R209,210,281	3	3	3	3										
151	062-900	464 OHM	R81,86	2	2	2	2										
152	062-901	475 OHM	R250,263	2	2	2	2										
153	062-902	499 OHM	R94	1	1	1	1										
154	062-904	511 OHM	R290,300	2	2	2	2										
155	062-905	536 OHM	R231	1	1	1	1										
156	062-906	549 OHM	R280	1	1	1	1										
157	057-872	562 OHM	R167,168	2	2	2	2										
158	062-908	604 OHM	R223	1	1	1	1										
159	066-180	665 OHM	R87	1	1	1	1										
160	062-915	732 OHM	R258,271	2	2	2	2										
161	062-922	RESISTOR, M.F., 909 OHM, 1/4W, 1%	R229	1	1	1	1										

AMPEX		Amplex Corporation REDWOOD CITY, CALIF. 94061		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405189		SHEET 5		V									
ITEM NO	PART NUMBER	DESCRIPTION	REF DESIGN	QTY REQD PER DASH NUMBER															
				-01	-02	-03	-04												
162	062-624	RESISTOR, M.F., 1.0K, 1/4W, 1%	R189,194	2	2	2	2												
163	062-599	1.3K	R71,85	2	2	2	2												
164	066-791	1.37K	R143,164	2	2	2	2												
165	062-626	1.4K	R150,217	2	2	2	2												
166	062-935	1.65K	R274,276	2	2	2	2												
167	062-643	2K	R147,153,162,163	4	4	4	4												
168	062-940	2.1K	R204	1	1	1	1												
169	062-941	2.21K	R193,197,207,254,267,293,303	7	7	7	7												
170	062-948	2.55K	R92,98	2	2	2	2												
171	066-063	2.61K	R74,89,121	3	3	3	3												
172	066-435	4.42K	R148,220	2	2	2	2												
173	062-966	4.75K	R144,215	2	2	2	2												
174	062-969	5.11K	R79	1	1	1	1												
175	062-971	5.49K	R101	1	1	1	1												
176	062-980	RESISTOR, M.F., 8.06K, 1/4W, 1%	R190,216	2	2	2	2												
177	066-849	RESISTOR, CF, 100K OHM, 1/4W, 5%	R319		1		1												
178																			
179	058-584	RESISTOR, VAR, CER., 20 OHM, 1/2W, 20%	R55	1	1		1												
180	044-941	100 OHM	R54,114,117	3	3		3												
181	044-891	200 OHM	R115,119,135,206	4	4		4												
182	044-927	500 OHM 20%	R65,116,122,123		4		4												
183	050-004	1K OHM 30%	R192	1	1		1												
184	044-943	2K OHM 20%	R221	1	1		1												
185	058-610	RESISTOR, VAR, CER., 20K OHM, 1/2W, 20%	R282	1	1		1												
186	058-994	RESISTOR, VAR, CER., 1K OHM 1/2W, 20%	R314	1	1		1												
187	075-003	RESISTOR, VAR, CER., 100K OHM, 1/2W, 20%	R320	1	1		1												
188																			
189																			
190	597-533	INTEGRATED CIRCUIT, 741 PRESTRESSED,	U12	1	1		1												
191	589-338	SN74LS04N, PRESTRESSED,	U3,4	2	2	2	2												
192	589-846	SN74LS74N, PRESTRESSED,	U2,9	2	2		2												
193	589-814	SN74LS04N, PRESTRESSED	U14	1	1		1												
194	589-820	SN74LS74N, PRESTRESSED	U5-8,22	5	5		5												
195	589-934	INTEGRATED CIRCUIT, SN74LS221N, PRESTRESSED	U1	1	1		1												
196	586-316	DIODE ARRAY, CA3039	U13,17	2	2	2	2												
197																			
198	587-682	INTEGRATED CIRCUIT, MC3403P	U10,11	2	2	2	2												
199	587-771	INTEGRATED CIRCUIT, 78L05AWC	U18	1	1		1												
200	590-329	INTEGRATED CIRCUIT, SN74LS123N, PRESTRESSED	U20	1	1		1												
201	087-614	ADHESIVE, BASE, SILICONE	REF: T1	A/R	A/R	A/R	A/R												
202	586-778	INTEGRATED CIRCUIT CA3054,	U15,16		2	2	2												
203	589-931	INTEGRATED CIRCUIT 74LS30, PRESTRESSED	U21		1	1	1												
204																			
205																			
206																			

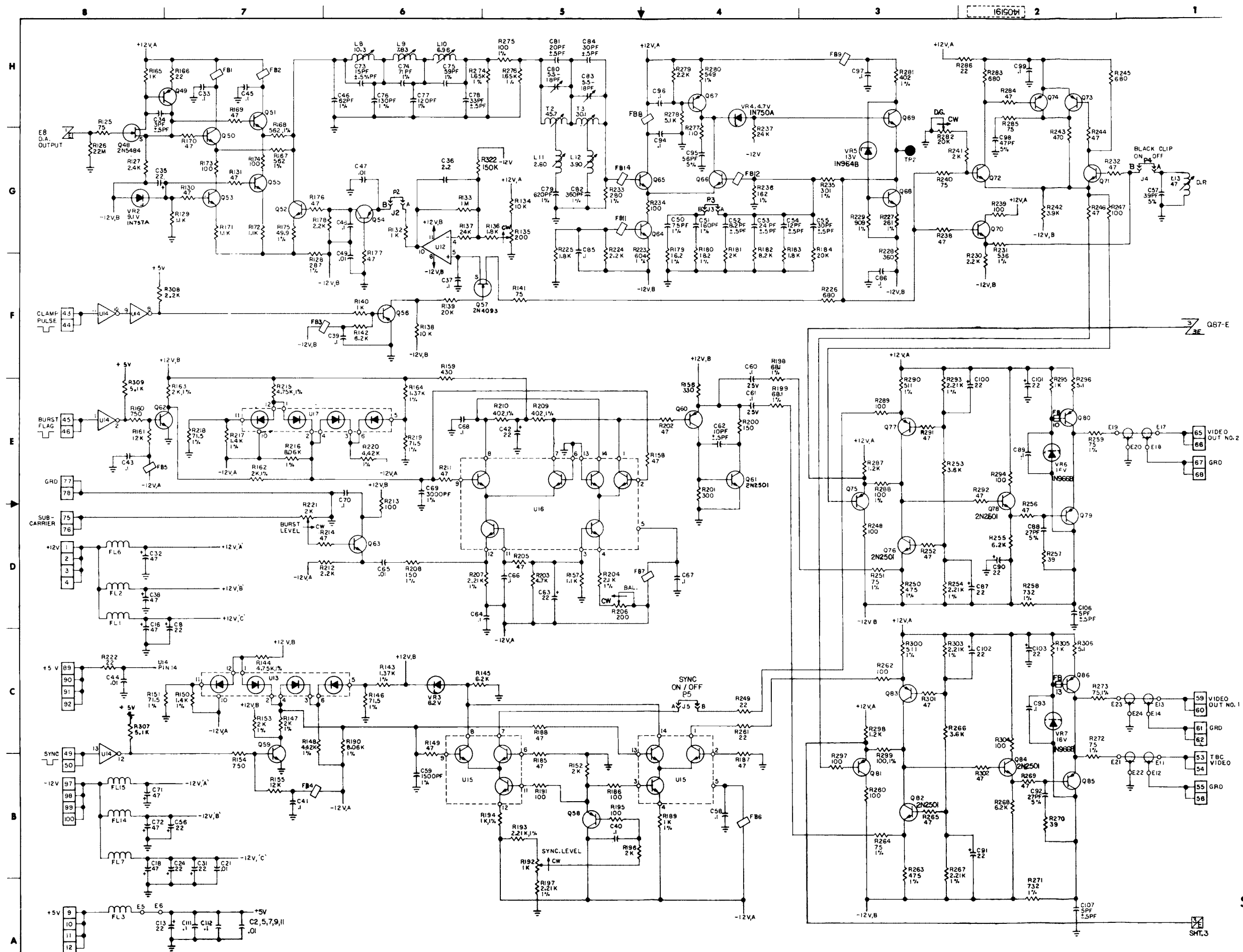
AMPEX		Ampex Corporation REDWOOD CITY CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1	405189		SHEET 6
ITEM NO	PART NUMBER	DESCRIPTION			REF DESIG	QTY REQD PER DASH NUMBER			
						-01	-02	-03	-04
207									
208									
209									
210	139-037	CONNECTOR, RECP, RF, 1 COAX PIN	J1			1	1	1	1
211	932-035	SHIELDING, BEAD, FERRITE,	REF: Q64, 65, 66, 80, 86			-	5	5	5
212	932-034	SHIELDING, BEAD, FERRITE	FBI-9			9	9	9	9
213									
214	1374188-01	INDUCTOR, FILTER	REF: FL1, 2, 3, 6, 7, 14, 15			7	7	7	7
215									
216	302-395	STRAP, CABLE, "MOUSE TAIL"			A/R	A/R	A/R	A/R	
217	615-004	WIRE, BARE, SOLID, 24 AWG	REF: FBI-9, L1, 2, 3, 6, 7, 14, 15		A/R	A/R	A/R	A/R	
218	616-569	CABLE, COAX, 75 OHM			A/R	A/R	A/R	A/R	
219	600-232	SLEEVING, TEFLON, CLEAR #24			A/R	A/R	A/R	A/R	
220	616-618	WIRE TWISTED 30 AWG			A/R	A/R	A/R	A/R	
221	474-500	SCREW, MACH, PAN HD, XREC, 4-40X.312 LG. (ASSEM 1/SHR)							7
222	280-130	MTG PAD, TRANSISTOR (TO-18)	REF: Q1-8, 10-46, 48-63, 67-88, U18		84	84	84	84	
223	280-998	MTG PAD, TRANSISTOR (TO-5)	REF: Q9		1	1	1	1	
224									
225									
226	143-981	JACK, PC CLOSED ENTRY	J2-A, B, J3-A, B, J4-A, B, J5-A, B, C, J6-A, B, C		12	12	12	12	
227	602-044	PLUG, SHORTING, RED	REF: J2-6		5	5	5	5	
228	502-002	WASHER, LOCK, HELICAL SPRING, #4			1	1	1	1	
229	283-105	SPACER, UNTHREADED, PLAIN, .125 LG			1	1	1	1	
230	187-259	TERMINAL, TEST POINT	TPI, 2, 3		3	3	3	3	
231									
232	066-826	RESISTOR, C.F. 2K OHM, 1/4W, 5%	R106, 152, 181, 196, 241			-	5	5	
233	066-830	RESISTOR, C.F. 10K OHM, 1/4W, 5%	R1, 16, 21, 26, 31, 36, 41, 47, 52, 134, 138			-	11	11	



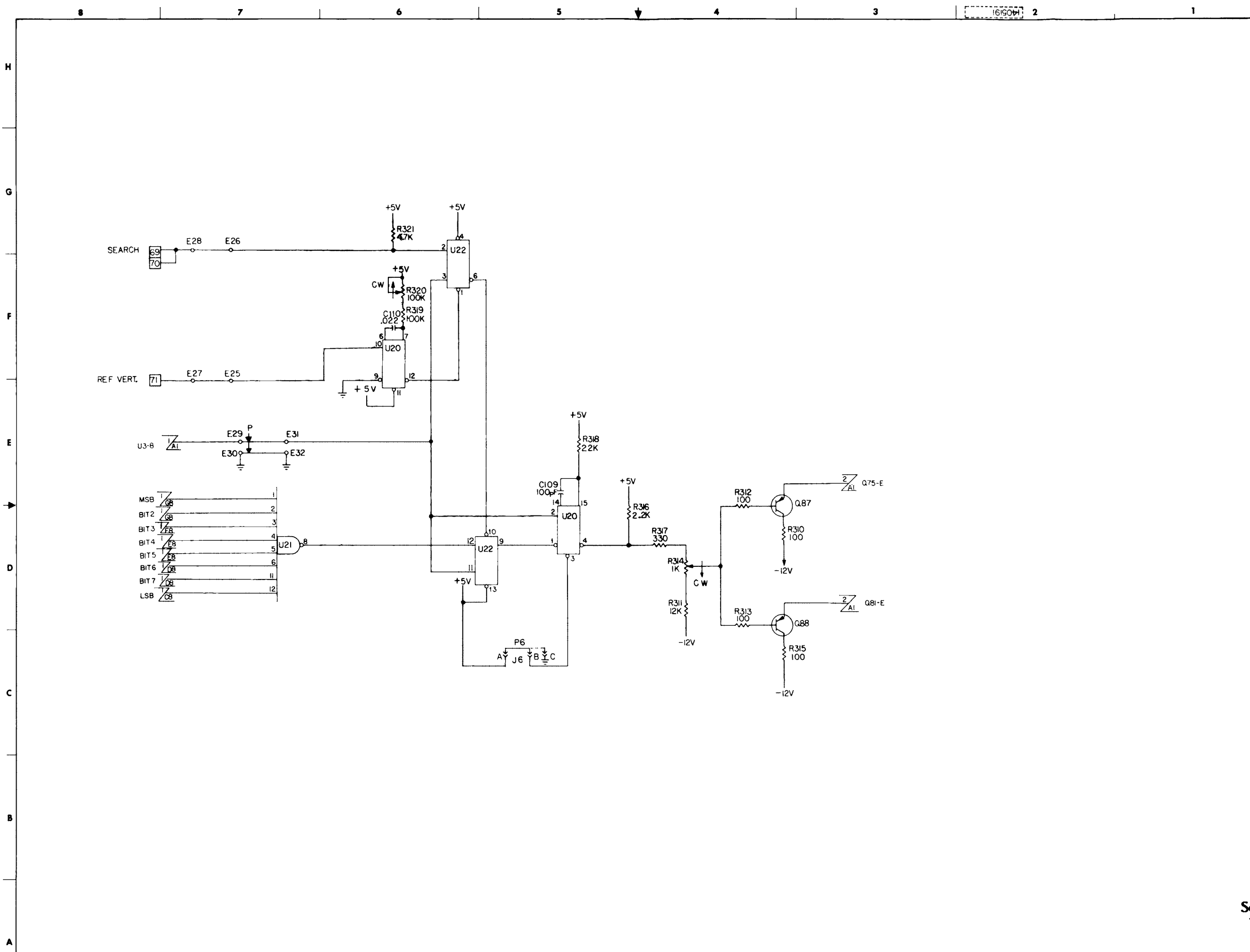
Assembly No. 1405189-04V. Video Output PWA, A14



Schematic No. 1405191J.
Video Output PWA, A14
(Sheet 1 of 3)




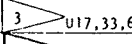
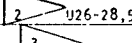
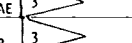
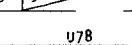
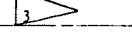
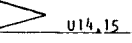
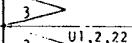
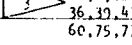
Schematic No. 1405191J.
Video Output PWA, A14
(Sheet 2 of 3)



Schematic No. 1405191J.
Video Output PWA, A14
(Sheet 3 of 3)

ITEM NO.	PART NUMBER	D	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
					-12	-13								
1					-10									
2	1405188		SCHEMATIC		K	L								
3														
4	1402331-AR		LABEL, MODULE		1	1								
5	1402332-01		EXTRACTOR ARM		1	1								
6	1402333-AA		SHIELD		1	1								
7														
8	051-770		INDUCTOR, FILTER FL1-4		4	4								
9	1374388-AC		INDUCTOR, VARIABLE, 1.8uH, ± 1 1.9		1	-								
10	1374388-AM		10uH, 1.1, 7, 8		3	3								
11	1374388-AF		33uH, 1.9		1									
12	1374388-AA		1.2uH, 1.9		1	1								
13	1374388-AD		INDUCTOR, VARIABLE, 2.2uH, ± 10 , 1.3		1	1								
14														
15	064-116		CAPACITOR, CERAMIC, DISC., .01uF, 50V, $\pm 20\%$ C26,35,38-41, 108,109,117,120, 122,145,147-151		22	22								
16	064-492		CAPACITOR, CERAMIC, DISC., .1uF, 12V, $\pm 20\%$ C4,5,7-9,13, 28,30,42,44,49,52-56,58, 60,62,63,66,68,73,81,83, 85-88,90,91,93-95,102,107, 111-115,119,123,124, 126-129,131,134,136,137, 140,141,144,156		-	-								
17	030-095		CAPACITOR, CERAMIC, MONO, .1uF, 50V, $\pm 20\%$ C157		1	1								
18	064-149		CAPACITOR, CERAMIC, MONO, 1uF, 100V, $\pm 20\%$ C3		1	1								
19	064-569		CAPACITOR, CERAMIC, DISC., .05uF, 50V, $\pm 20\%$ C31,59,105,140		4	4								
20	064-492		CAPACITOR, CERAMIC, DISC., .1uF, 12V, $\pm 20\%$ C4,5,7-9,13,16, 42,43,52-56,58, 60,62,63,66,68, 73,81,83,85-88,90,91,93-95, 102,107,111-115,119,123, 124,126-129,131,134,136, 137,140,141,144,156		-	-								
22	034-156		CAPACITOR, MICA, 5pF, 500V, ± 5 pF C65		1	1								
23	034-759		15pF, ± 5 pF C49		1	1								
24	056-601		47pF, ± 5 pF C21		1	1								
25	034-259		56pF, $\pm 1\%$ C159		1	-								
26	034-221		200pF, $\pm 1\%$ C20		1	1								
27	034-222		100pF, $\pm 1\%$ C33		1	1								
28	034-371		510pF, $\pm 1\%$ C19		1	1								
29	056-291		470pF, $\pm 1\%$ C11		1	1								
30	034-688		30pF, $\pm .5$ pF C158		1	1								
31	056-164		CAPACITOR, MICA, 22pF, 500V, $\pm .5$ pF C98,133		2	2								

AMFEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-14051EG SHEET 2 OF 9	REV R													
ITEM NO	PART NUMBER	DESCRIPTION			REF DESIG	QTY REQD PER DASH NUMBER														
						-12	-13													
32	034-259	CAPACITOR, MICA, 56pF, 500V, $\pm 1\%$			C70,159	-	2													
33	034-177	100pF, $\pm 5\%$			C15,32,70,97,99	-	-													
34	034-183	62pF,			C96	1	1													
35	034-208	30pF,			C61,80,152,153	-	-													
36	034-228	620pF			C67	1	1													
37	034-177	100pF,			C15,32,97,152,153	-	-													
38	034-240	220pF			C1,14,34,57,79,89,92,100,143	9	9													
39	034-269	22pF,			C71,98,133	-	-													
40	034-286	200pF,			C104,138,139	3	2													
41	056-107	590pF			C46,47	2	2													
42	034-208	30pF,			C61,80	2	2													
43	034-386	910pF,			C72	1	1													
44	034-177	CAPACITOR, MICA, 100pF, 500V, $\pm 5\%$			C15,32,97,152,153,162	6	6													
45	038-254	CAPACITOR, VARIABLE, CERAMIC, 9-35pF, 100V			C161	1	1													
46	034 941	CAPACITOR, MICA, 51pF, 500V, $\pm 5\%$			C142	1	1													
47	056-680	43pF, 500V, $\pm .5\mu F$			C84,135	2	2													
48	034-969	43pF, 500V, $\pm 5\%$			C84,135	-	-													
49	034-950	1000pF, 100V, $\pm 5\%$			C46	1	1													
50	056-163	470pF, 500V, 5%			C12,29,121	3	3													
51	056-292	500pF, 500V, $\pm 5\%$			C101,130	2	2													
52	034-285	CAPACITOR, MICA, 75pF, 500V, $\pm 1\%$			C70	1	-													
53	064-616	CAPACITOR, CER., TC = N750, 22pF, 1000V, $\pm 5\%$			C71	1	1													
54	064-568	CAPACITOR, CER., TC = N750, 100pF, 50V, $\pm 5\%$			C99	1	1													
55																				
56	064-492	CAPACITOR, CER., DISC., .1uF, 12V, $\pm 20\%$			+80% C4,5,7-9,13,16,17,22,25,28,30,42,43,52-56,58,60,62,63,66,73,81,83,85-88,90,91,93-95,102,107,111-115,119,123,124,126-129,131,134,135,137,140,141,144,156	58	58													
59	069-090	CAPACITOR, MYLAR, .001uF, 50V, $\pm 5\%$			C36,37	2	2													
60	069-092	.047uF,			C2,6,74,82,116	5	5													
61	069-095	.033uF,			C78,125	2	2													
62	069-097	.022uF,			C10	1	1													
63	069-100	.01uF,			C69	1	1													
64	069-109	.0022uF,			C77,118	2	2													
65	069-113	CAPACITOR, MYLAR, .1uF, 50V, $\pm 5\%$			C154	1	1													
66																				
67	064-314	CAPACITOR, CER., MONO., 1uF, 50V, $\pm 20\%$			C18	1	1													
68																				
69	037-298	CAPACITOR, TANT., 47uF, 6V, $\pm 20\%$			C23,24,45	3	3													
70	057-892	CAPACITOR, TANT., 47uF, 20V, $\pm 20\%$			C27,51,106,146	4	4													
71	037-954	CAPACITOR, TANT., 22uF, 15V, $\pm 20\%$			C103,110,132,155	4	4													
72																				
73																				
74																				
75																				

AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405186 SHEET 3 OF 9	REV R							
ITEM NO	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER										
				-12	-13									
76	017-161	CRYSTAL, QUARTZ, 14.318180MHz Y1		1	1									
77	302-395	CABLE STRAP (MOUSE TAIL) REF: Y1		1	1									
78														
79														
80	581-610	DIODE, LIGHT EMITTING, GREEN PC190C DATA DISPLAY DS1		1	1									
81	013-599	DIODE, SWITCHING, CD458, 1N4531 CR1,2,4-7,9,11,13		-	-									
82	581-079	SCHOTTKY, HP5082-28 0 CR12,14		2	2									
83	013-599	SWITCHING, CD458 CR1-7,9,11,13		-	-									
84	038-243	VARACTOR, MV1650 CR8		1	1									
85	038-244	VARACTOR, MV1649 CR10		-	-									
86	013-599	SWITCHING, CD458, 1N4531 CR1-7,9,11,13,15		11	11									
87	013-224	ZENER, 6.8V, CD32, .4W, 1N754A VR3,5		2	2									
88	013-167	ZENER, 8.2V, CD32, .4W, 1N754A VR6		1	1									
89	013-224	ZENER, 6.8V, CD32, .4W VR1,3,5		-	-									
90	013-257	ZENER, 6.2V, CD32, .4W VR2		1	-									
91	013-258	ZENER, 5.1V, CD32, .4W VR7-10		-	-									
92	013-663	ZENER, 18V, CD32, .4W, 1N9678 VR4		1	1									
93	013-332	ZENER, 4.7V, CD32, .4W VR11		-	-									
94	039-252	VARACTOR, MV1634 CR10		-	-									
95	038-290	DIODE, VARACTOR, MV1638 CR10		1	1									
96	063-023	INDUCTOR, FIXED, 47uH, $\pm 5\%$ L5,6		2	2									
97	068-058	INDUCTOR, FIXED, 33uH, $\pm 5\%$ L2		1	1									
98	058-126	INDUCTOR, FIXED, 18uH, $\pm 5\%$ L4		1	1									
99	013-358	DIODE, ZENER, 5.1V, CD32, .4W, 1N751A VR7,8,10		3	3									
100														
101														
102	590-450	INTEGRATED CIRCUIT, CMOS, CD4053BE  3 U11,16,19,65,68		5	5									
103														
104	586-121	LINEAR, 711 U18		1	1									
105	586-124	LINEAR, 710 U3,43		2	2									
106	590-612	MC1458  3 U17,33,61,70		4	4									
107	589-802	NE529H  2 U26-28,57		4	4									
108	590-569	CA3096AE  3 U25		1	1									
109	590-602	TL082CP  3 U4,67,69		3	3									
110	587-771	78L05A U78		1	1									
111														
112														
113	590-543	ECL, MC10116  3 U58		1	1									
114														
115	589-024	MOS, MM5321  1 U14,15		2	2									
116														
117														
118	589-816	TTL, 74LS10  3 U52		1	1									
119	589-870	INTEGRATED CIRCUIT, TTL, 74LS74  3 U1,2,22,30,31,36,37,41,42,53,60,75,77		13	13									

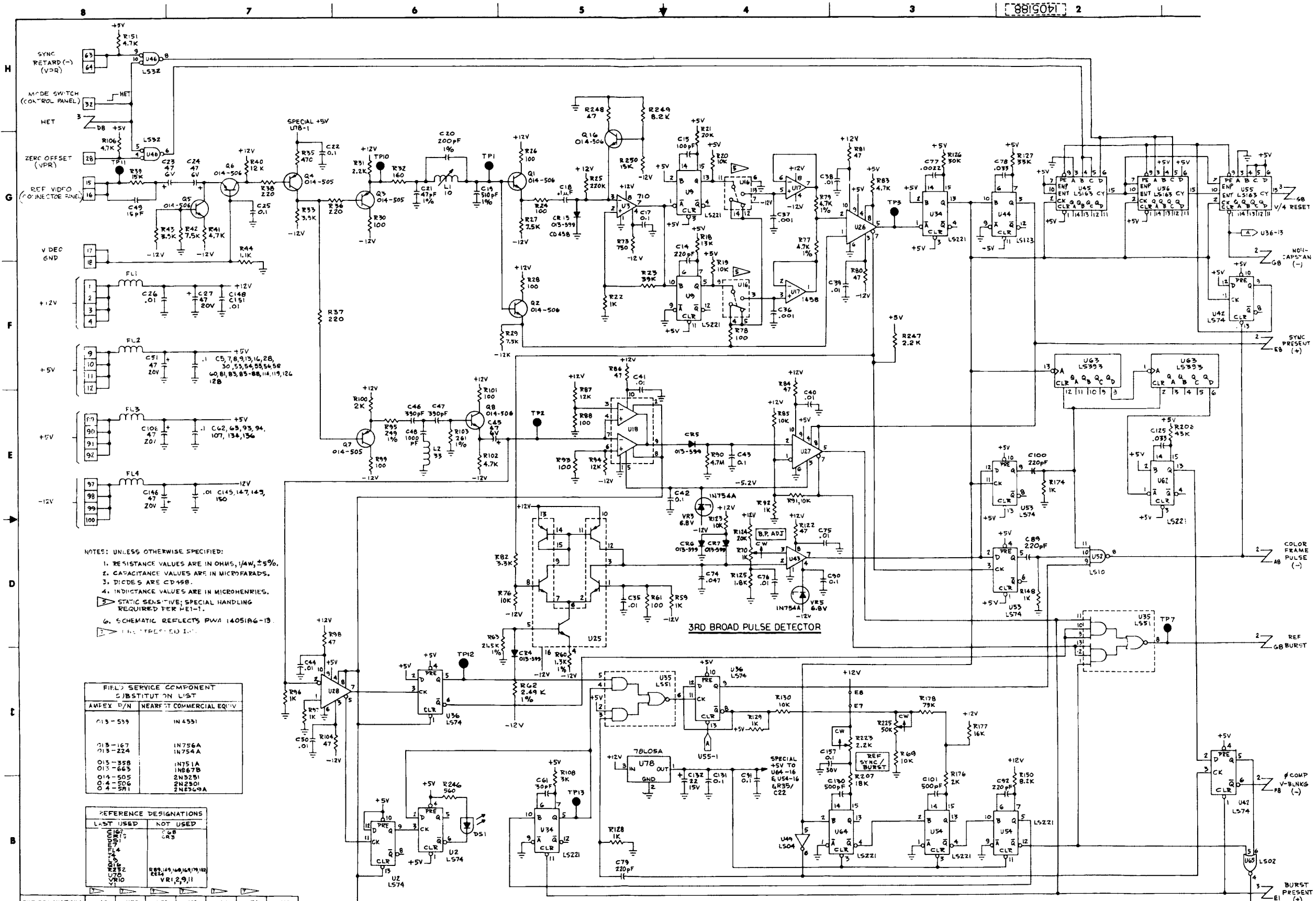
AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405186	SHEET 4 OF 9		REV R					
ITEM NO	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
					-12	-13								
120	589-813		INTEGRATED CIRCUIT, TTL, 74LS00	3	U29,50	2	2							
121	590-548		74LS51		U35	1	1							
122	590-328		74LS32		U46	1	1							
123	589-814		74LS04		U20,21,24,47,49,71	6	6							
124	590-329		74LS123		U44	1	1							
125	589-934		74LS221		U8-10,12,23,32,34,37,38,40,51,54,62,64,72,74	15	16							
126	590-332		74LS02		U7,65	2	2							
127	589-830		74LS174		U13	-	-							
128	590-333		74LS163		U45,55,56,73	4	4							
129	589-932		74LS113		U48	1	1							
130	589-929		74LS05		U59	1	1							
131	590-445		74LS160		U5	1	1							
132	589-935		74LS393		U63	1	1							
133	590-336		74LS390		U6	1	1							
134	589-825		74LS157		U76	1	1							
135	590-134		INTEGRATED CIRCUIT, TTL, 74174	3	U13	1	1							
136														
137	066-665		RESISTOR, FIXED, C.F., 1K OHMS, 1/4W, ±5%		R1,2,17,22,34,49,50,54,58,59,92,96,97,112,128,129,148,165,170,174,192,228,251	23	23							
139	042-331		RESISTOR, FIXED, M.F., 16.9K OHMS, 1/4W, ±1%		R220	1	1							
140	062-562		12.4K		R219	1	1							
141	062-599		1.30K		R60	1	1							
142	062-600		11.0K		R16	1	1							
143	062-624		1.0K		R77,79,120,204	-	-							
144	062-643		2.0K		R175,204	2	2							
145	062-624		1.0K		R120,202	2	2							
146	062-800		21.5K		R63	1	1							
147	062-983		10.0K		R121,201,200,203,221	5	5							
148	062-880		249		R95	1	1							
149	062-831		261		R103	1	1							
150	062-947		2.49K		R62	1	1							
151	062-962		4.02K		R218	1	1							
152	062-966		4.75K		R74	1	1							
153	057-113		5.1K		R56	1	1							
154	062-983		10.0K		R56,121,201,221	-	-							
155	062-997		18.2K		R75,205	2	2							
156	062-998		18.7K		R217	1	1							
157	066-024		243K		R12	1	1							
158	062-983		10.0K		R56,121,201,201,203,221	-	-							
160	066-468		150K		R13	1	1							
161	056-597		RESISTOR, FIXED, M.F., 1.43K OHMS, 1/4W, ±1%		R241	1	1							
162	066-662		RESISTOR, FIXED, C.F., 200 OHMS, 1/4W, ±5%		R57,164,184,193	4	4							
163	066-662		RESISTOR, FIXED, C.F., 200 OHMS, 1/4W, ±5%		R57,164,184,193,224	-	-							

AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-14C5186	SHEET 5 OF 9	REV F																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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164	066-820	RESISTOR, FIXED, C.F., 750 OHMS, 1/4W, ± 5%	R73																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

AMPEX		Amplex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405186	SHEET 6 OF 9	REV R						
ITEM NO.	PART NUMBER		DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
					-12	-13								
198	066-851		RESISTOR, FIXED, C.F., 510K OHMS, 1/4W, $\pm 5\%$	R10		1								
199	066-856		15K	R39,68,144		-								
200	066-858		4.7M	R90		1								
201	066-860		39K	R4,23,197	3	3								
202	066-864		13K	R3,13	2	2								
203	066-865		12K	R87,94		-								
204	066-867		51K	R8,15	2	2								
205	066-958		75K	R178		1								
206	066-873		20K	R21,124	2	2								
207	066-913		220K	R25		1								
208	066-928		2.4K	R189,211	2	2								
209	066-938		47	R55,80,81,84, 86,98,104, 122,131,132, 134,147, 155-157,159, 186,187,230		-								
210	066-984		160	R32	1	1								
211	066-985		62	R112		-								
212	075-002		56	R194	1	1								
213	076-045		75	R149		-								
214	076-053		390K	R5	1	1								
215	076-055		750K	R216		1								
216	076-061		1.8M	R7		-								
217	066-868		120K	R242	1	-								
218	076-045		RESISTOR, FIXED, C.F., 75 OHMS, 1/4W, $\pm 5\%$	R112,153	2	2								
219	058-004		RESISTOR, VAR., CER., 1K OHMS, .5W (TO-5)	R70	1	1								
220	058-251		100K .5W (TO-5)	R245	1	1								
221	044-944		5K .5W (TO-5)	R72	1	1								
222	058-995		2K .5W	R199	1	1								
223	075-216		50K .5W (H)	R46,64,65	3	3								
224	058-997		5K, .5W	R173,226	2	2								
225	058-540		5K, .5W	R251	1	1								
226	075-002		50K .5W	R67,225	2	2								
227	058-635		5K .5W, 22 TURNS	R146,208	2	2								
228	075-213		5K .5W (H)	R45	1	1								
229	075-215		20K .5W (H)	R64,65	-	-								
230	075-216		RESISTOR, VAR., CER., 50K OHMS .5W (H)	R46	-	-								
231	075-151		RESISTOR, VAR., CCND., PLASTIC, 2.2K OHMS, .1W	R223	1	1								
232	075-250		RESISTOR, VAR., COND., PLASTIC, 22K OHMS, .05W	R240	1	1								
233	014-505		TRANSISTOR, CD446, 2N2501	Q1,2,5,6,8, 11-16	11	11								
234	014-505		TRANSISTOR, CD445, 2N2251	Q3,4,7	3	3								
235	014-506		TRANSISTOR, CD446	Q1,2,5,6,8, 11-15	-	-								
236	014-581		TRANSISTOR, CD6150, 2N2369A	Q9,10 DS1	2	2								
237	280-130		SPACER, TRANSISTOR, TO-18	REF: Q1-8,10-15	-	-								
238	932-035		SHIELDING, BEAD, FERRITE FB1	REF: Q9 DS1	1	1								
239	280-130		SPACER, TRANSISTOR, TO-18	REF: Q1-8,10-16	15	16								
240	143-991		JACK, P.C., CLOSED ENTRY	REF: J1-6	23	23								

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT N° 92739	LIST OF MATERIALS	LM-1405186	SHEET 7 OF 9		REV R										
ITEM NO.	PART NUMBER	DESCRIPTION	REF. DESIG.	QTY REQD PER DASH NUMBER															
				-12	-13														
241	602-044	PLUG, SHORTING, RED J1-6		6	6														
242	076-047	RESISTOR, FIXED, C.F., 110K OHMS, 1/4W, ± 5% R242		1	1														
243	187-259	TERMINAL, LUG, TEST TPI-15		15	15														
244	075-172	BRACKET REF: R223,240		2	2														
245	230-033	KNOB REF: R223,240		2	2														
246	283-105	SPACER, PLAIN, .140 I.D., .125 LG		1	1														
247	471-062	SCREW, MACH., 4-40 X .375 LG		1	1														
248	473-325	SCREW, MACH., 4-40 X .312 LG		-	-														
249	501-169	WASHER, PLAIN, #4		-	-														
250	502-002	WASHER, HELICAL SPRING, #4		1	1														
251		WIRE, STRAND, 24 AWG	A/R	A/R															
252	474-500	SCREW, MACH., PAN HD, XREC, 4-40 X .312 LG (ASSEM WSHR)		7	7														
253	066-667	RESISTOR, FIXED, C.F., 3K OHMS, 1/4W, ± 5% R103,137,154, 229		4	4														
254	066-668	4.7K R41,77,79,83, 102,105,106, 140,151,153, 160,167,171, 185,198,215, 227,231,238, 244		20	20														
255	066-711	7.5K R29,47		-	-														
256	066-812	100 R26,28,30,61, 78,88,93,99, 101,133,141, 152,235,236, 237		-	-														
258	066-818	470 R35,115,239		3	3														
259	066-826	2K R14,27,100, 114,118,176		-	-														
260	066-820	10K R19,20,48, 51-53,66,69, 71,76,95,91, 119,123,130, 162,180,195, 196,213,214, 222		22	22														
261	066-826	2K R14,100,114, 118,176		5	5														
262	066-865	12K R40,97,94		3	3														
263	066-938	47 R24,55,80,81, 84,86,98,104, 122,131,132, 134,147, 155-157,159, 186,187,230		-	-														
265	066-938	47 R55,80,81,94, 96,98,104, 122,131,132, 134,147, 155-157,159, 186,187,230, 248		20	20														
266																			
267	066-669	8.2K R42,150,249		3	-														
268	066-856	15K R39,68,144, 250		4	4														
269	066-812	RESISTOR, FIXED, C.F., 100 OHMS, 1/4W, ± 5% R24,26,28,30, 61,78,88,93, 99,101,133, 141,152,235,236,237		16	16														
270																			

AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405186 SHEET 8 OF 9	REV R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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271	066-711	RESISTOR, FIXED, C.F., 7.5K OHMS, 1/4W, $\pm 5\%$	227,29,47		3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																



- NOTES: UNLESS OTHERWISE SPECIFIED:
1. RESISTANCE VALUES ARE IN OHMS, $\frac{1}{4}W, \pm 5\%$.
 2. CAPACITANCE VALUES ARE IN MICROFARADS.
 3. DIODES ARE CD458.
 4. INDUCTANCE VALUES ARE IN MICROHENRIES.
 5. STATIC SENSITIVE; SPECIAL HANDLING REQUIRED PER HEI-1.
 6. SCHEMATIC REFLECTS PWA 1405186-13.
 7. UNLESS OTHERWISE SPECIFIED.

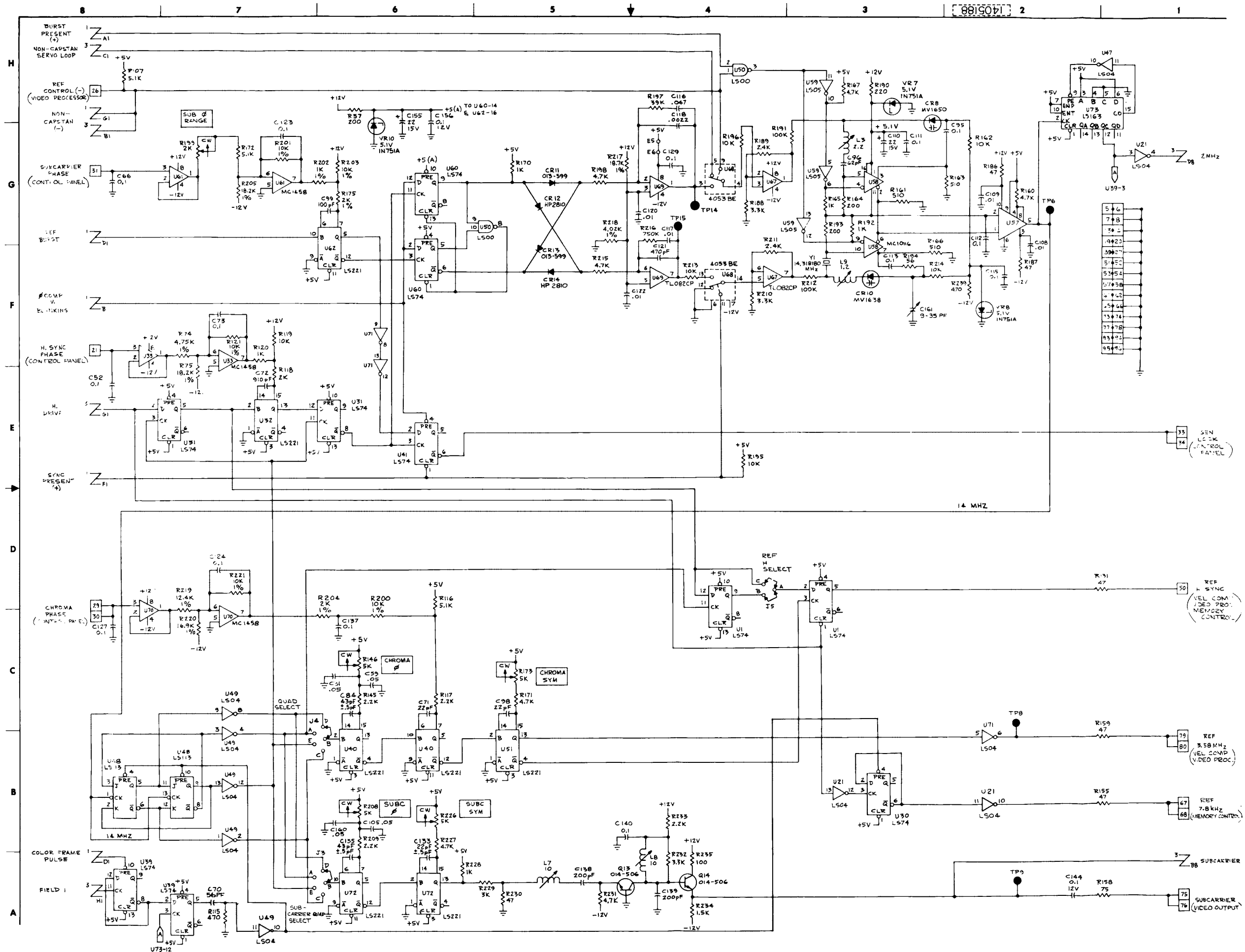
FIELD SERVICE COMPONENT SUBSTITUTION LIST	
AMPEX P/N	NEAREST COMMERCIAL EQUIV.
013-539	IN4551
013-167	IN756A
013-224	IN754A
013-358	IN751A
013-663	IN867B
014-505	2N5251
04-506	2N2501
04-581	2N269A

REFERENCE DESIGNATIONS	
LAST USED	NOT USED
U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, U31, U32, U33, U34, U35, U36, U37, U38, U39, U40, U41, U42, U43, U44, U45, U46, U47, U48, U49, U50, U51, U52, U53, U54, U55, U56, U57, U58, U59, U60, U61, U62, U63, U64, U65, U66, U67, U68, U69, U70, U71, U72, U73, U74, U75, U76, U77, U78, U79, U80, U81, U82, U83, U84, U85, U86, U87, U88, U89, U90, U91, U92, U93, U94, U95, U96, U97, U98, U99, U100	R89, 149, 169, 179, 189, 204, 214, 224, 234, 244, 254, 264, 274, 284, 294, 304, 314, 324, 334, 344, 354, 364, 374, 384, 394, 404, 414, 424, 434, 444, 454, 464, 474, 484, 494, 504, 514, 524, 534, 544, 554, 564, 574, 584, 594, 604, 614, 624, 634, 644, 654, 664, 674, 684, 694, 704, 714, 724, 734, 744, 754, 764, 774, 784, 794, 804, 814, 824, 834, 844, 854, 864, 874, 884, 894, 904, 914, 924, 934, 944, 954, 964, 974, 984, 994, 1004

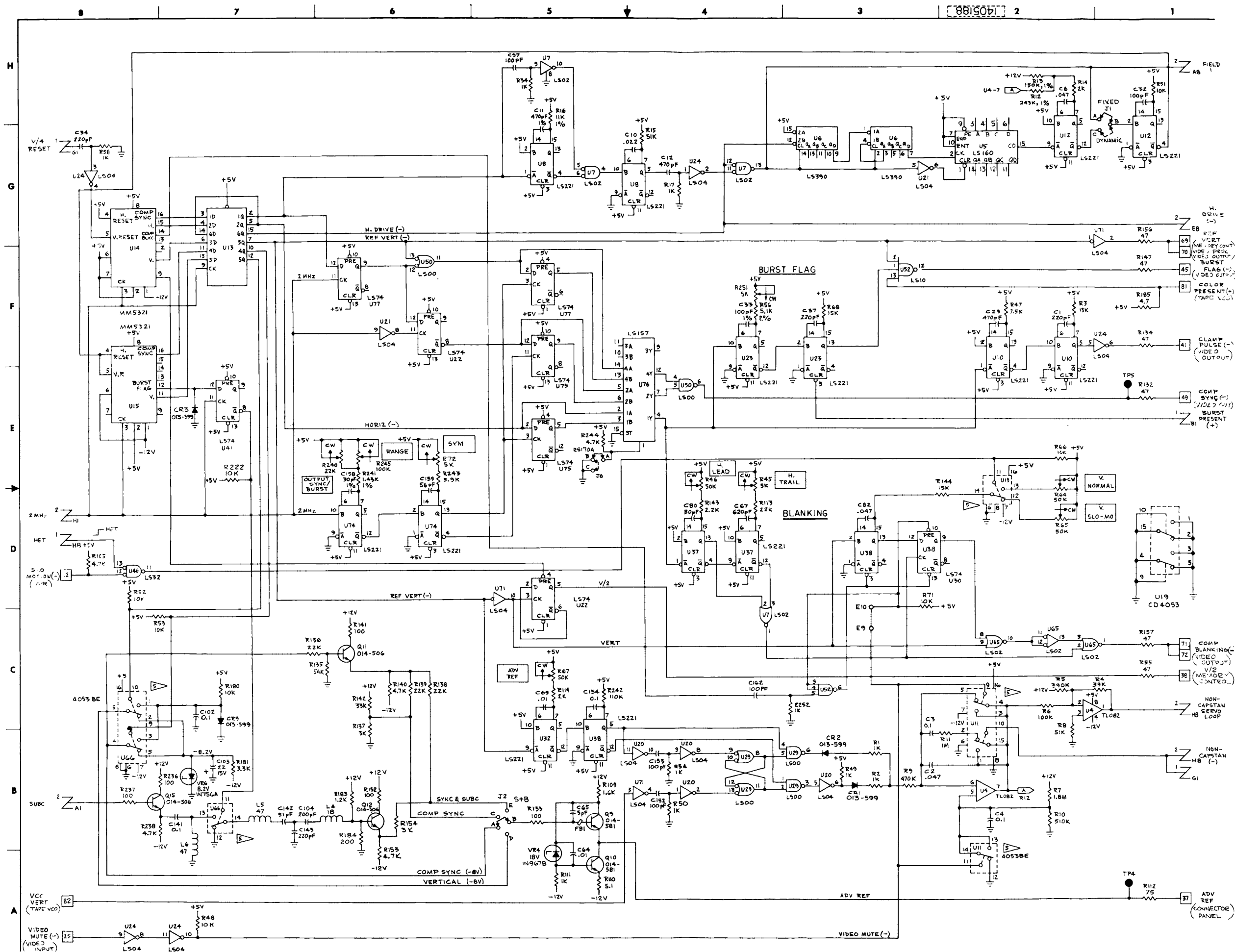
REF DESIGNATIONS	U43	U52	U58	U59	U63	U76	U78
AMPEX P/N	589-9-2	589-814	590-54	589-92	589-935	589-825	587-771
VENDOR P/N	74LS113	74LS10	MC10116	74LS05	74LS393	74LS157	7BL05A
VOLTAGE PIN	14	14	16 (-12V)	14	14	16	3 (-12)
GROUND P/N	7	7	8	7	7	8	2

REF DESIGNATIONS	U1, 2, 22, 30, 31, 36, 39, 41, 42, 53, 64, 75, 77	U3, 43	U4, 67, 69	U5	U6	U7, 65	U8-10, 12, 23, 32, 34, 37, 38, 40, 51, 54, 62, 64, 72, 74	U11, 16, 18, 66, 68	U17, 33, 61, 70	U18	U14, 15	U20, 21, 24, 41, 49, 71	U13	U26-28, 57	U29, 50	U25	U35	U44	U45, 55, 56, 73	U46
AMPEX P/N	589-820	586-124	590-602	590-44	590-336	590-932	589-934	590-450	590-612	586-121	589-024	589-814	590-134	589-802	589-813	590-569	590-348	580-329	590-338	590-328
VENDOR P/N	74LS174	LM710H	74LS160	74LS160	74LS160	74LS160	74LS160	CD4053BE	MC1458	LM711	MM57521	74LS04	74174	HE529H	74LS00	CAR096 AS	74LS51	74LS123	74LS169	74LS32
VOLTAGE PIN	14	+12(8)	+5(8)-5(4)	16	16	14	16	16(8)-12(7)	+5(8)-5(4)	16	16	14	16	+5(8)	14	-12(16)	14	16	16	14
GROUND PIN	7	1	—	8	8	7	8	8	—	1	—	7	8	6	7	—	7	8	8	7

Schematic No. 1405188L.
Sync Generator PWA, A15
(Sheet 1 of 3)



Schematic No. 1405188L.
Sync Generator PWA, A15
(Sheet 2 of 3)



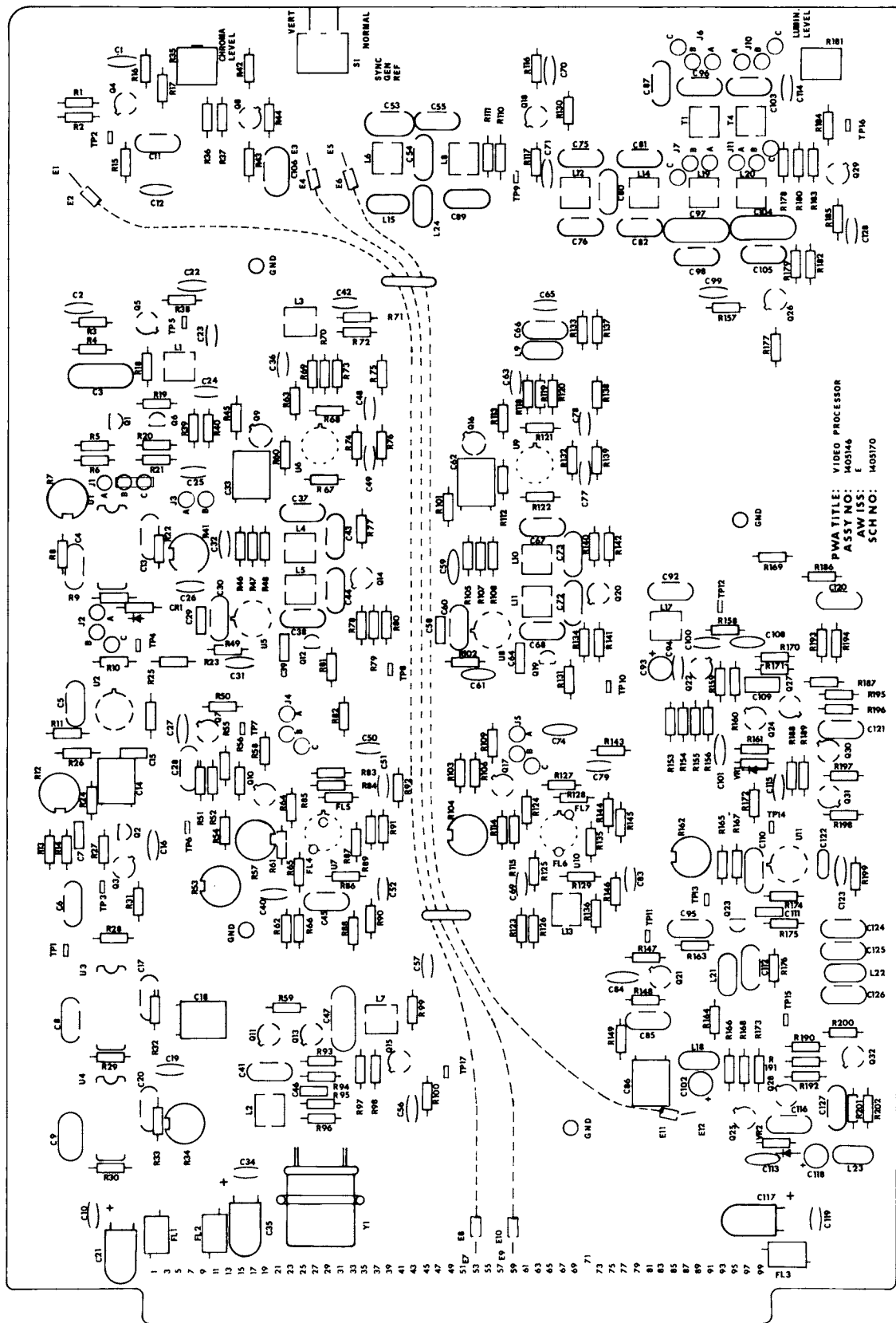
Schematic No. 1405188L.
Sync Generator PWA, A15
(Sheet 3 of 3)

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER						
				-01	-02	-03	-04	-05	-06	
1				-01	-02	-03	-04	-05	-06	
2	1405170	SCHEMATIC	(T)	(A)	B	D	E	H		
3	1374188-01	INDUCTOR, FILTER	FL 1-3	3	3	3	3	3	3	
4										
5	013-332	DIODE, ZENER, 4.7V (1N750A)	VR1	1	1	1	1	1	1	
6	013-599	DIODE, SWITCHING (1N4541)	CR1	1	1	1	1	1	1	
7	013-830	DIODE, ZENER, 16V, (1N966B)	VR2	1	1	1	1	1	1	
8										
9										
10	014-506	TRANSISTOR, NPN (2N2501)	Q3-5,7,9-11,13,15-18,21,22,24	18	18	18	18	18	18	
11	014-505	TRANSISTOR, PNP (2N2501)	Q8,14,20,25,26,28-30	8	8	8	8	8	8	
12	580-226	TRANSISTOR, (2N4124)	Q1,6	2	2	2	2	2	2	
13	580-453	TRANSISTOR, FET, (2N5639)	Q2,12,19,23	4	4	4	4	4	4	
14										
15										
16	586-437	INTEGRATED CIRCUIT, LM301AH	U2,5,8,11	4	4	4	4	4	4	
17	586-447	INTEGRATED CIRCUIT, CA3026	U6,7,9,10	4	4	4	4	4	4	
18	589-934	INTEGRATED CIRCUIT, 74LS221N, PRESTRESSED	U1,3,4	3	3	3	3	3	3	
19	034-220	CAPACITOR, MICA, 150pF, 1%, 500V	C55,98,126			3	3	3	3	
20	034-543	CAPACITOR, MICA, 240pF, 1%,	C105			1	1	1	1	
21	034-156	CAPACITOR, MICA, 5pF, .5pF,	C82	1	1	1	1	1	1	
22	056-022	CAPACITOR, MICA, 6.8pF, .5pF,	C121	1	1	1	1	1	1	
23	056-239	CAPACITOR, MICA, 10pF, .5pF,	C95,116	2	2	2	2	2	2	
24	034-759	CAPACITOR, MICA, 15pF, .5pF,	C103	1	1	1	1	1	1	
25	056-204	CAPACITOR, MICA, 16pF, .5pF,	C37,67	2	2	2	2	2	2	
26	056-164	CAPACITOR, MICA, 22pF, .5pF,	C13,125	2	2	2	2	2	2	
27	034-360	CAPACITOR, MICA, 24pF, .5pF,	C44,72	2	2	2	2	2	2	
28	034-943	CAPACITOR, MICA, 27pF, 5%,	C127	1	1	1	1	1	1	
29	034-688	CAPACITOR, MICA, 30pF, .5pF,	C5,30,60,110	5	5	4	4	4	4	
30	034-251	CAPACITOR, MICA, 39pF, .5pF,	C106	1	1	1	1	1	1	
31	034-181	CAPACITOR, MICA, 47pF, 5%,	C4,41,85,120	4	4	4	4	4	4	
32	034-184	CAPACITOR, MICA, 68pF, 5%,	C38,68	2	2	2	2	2	2	
33	034-185	CAPACITOR, MICA, 75pF, 5%,	C124	1	1	1	1	1	1	
34	034-367	CAPACITOR, MICA, 91pF, 1%,	C53	1	1	1	1	1	1	
35	034-177	CAPACITOR, MICA, 100PF, 5%,	C8,17	2	2	2	2	2	2	
36	034-219	CAPACITOR, MICA, 120pF, 1%,	C75	1	1	1	1	1	1	
37	034-239	CAPACITOR, MICA, 130pF, 1%, 500V	C76	1	1	1	1	1	1	

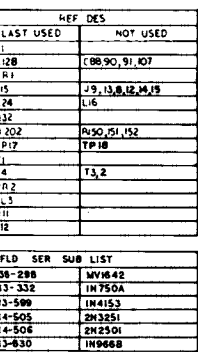
AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739	LIST OF MATERIALS	LM-1405146	SHEET 2		REV P																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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AMPEX		Ampex Corporation REDWOOD CITY, CALIFORNIA		CODE IDENT NO 92739	LIST OF MATERIALS	LM-1405146	SHEET 3		REV P						
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER											
				-01	-02	-03	-04	-05	-06						
82	1378591-AC	TRANSFORMER, BIFILAR 10.8uH	T2			1	-	-	-	-					
83	1378591-AJ	TRANSFORMER, BIFILAR 44 uH	T1			1	-	-	-	-					
84	1378591-AK	TRANSFORMER, BIFILAR 67.0 uH	T4			1	-	-	-	-					
85	066-191	RESISTOR, FIXED, M.F., 205 OHM, 1/8W, 1%	R180				1				1				
86	062-866	RESISTOR, FIXED, M.F., 162 OHM, 1/8W, 1%	R44				1					1			
87	062-834	RESISTOR, FIXED, M.F., 73.2 OHM, 1/8W, 1%	R60,67,112,122	4	4	4	4	4	4	4					
88	062-836	RESISTOR, FIXED, M.F. 75 OHM, 1/8W, 1%	R166			1	1	1	1	1		1			
89	062-864	RESISTOR, FIXED, M.F., 150 OHM, 1/8W, 1%	R130,177	2	2	2	2	2	2	2		2			
90	066-790	RESISTOR, FIXED, M.F. 158 OHM, 1/8W, 1%	R186			1	1	1	1	1		1			
91	066-191	RESISTOR, FIXED, M.F. 205 OHM, 1/8W, 1%	R44,180	2	2	-	-	-	-	-		-			
92	062-877	RESISTOR, FIXED, M.F. 221 OHM, 1/8W, 1%	R70,119,124,196	4	4	4	4	4	4	4		4			
93	062-881	RESISTOR, FIXED, M.F. 261 OHM, 1/8W, 1%	R199			1	1	1	1	1		1			
94	066-170	RESISTOR, FIXED, M.F. 280 OHM, 1/8W, 1%	R154			1	1	1	1	1		1			
95	062-884	RESISTOR, FIXED, M.F. 301 OHM, 1/8W, 1%	R127			1	1	1	1	1		1			
96	062-887	RESISTOR, FIXED, M.F., 332 OHM, 1/8W, 1%	R86,91,129	3	3	3	3	3	3	3		3			
97	062-890	RESISTOR, FIXED, M.F. 365 OHM, 1/8W, 1%	R64			1	1	1	1	1		1			
98	062-898	RESISTOR, FIXED, M.F., 432 OHM, 1/8W, 1%	R83			1	1	1	1	1		1			
99	057-872	RESISTOR, FIXED, M.F., 562 OHM, 1/8W, 1%	R159			1	1	1	1	1		1			
100	062-915	RESISTOR, FIXED, M.F. 732 OHM, 1/8W, 1%	R201			1	1	1	1	1		1			
101	062-873	RESISTOR, FIXED, M.F. 196 OHM, 1/8W, 1%	R111			1	-	-	-	-		-			
102	062-929	RESISTOR, FIXED, M.F., 1.15K OHM, 1/8W, 1%	R195			1	1	1	1	1		1			
103	062-625	RESISTOR, FIXED, M.F. 1.21K OHM, 1/8W, 1%	R160			1	1	1	1	1		1			
104	062-626	RESISTOR, FIXED, M.F. 1.40K OHM, 1/8W, 1%	R80,142	2	2	2	2	2	2	2		2			
105	066-173	RESISTOR, FIXED, M.F. 2.94K OHM, 1/8W, 1%	R161			1	1	1	1	1		1			
106	062-961	RESISTOR, FIXED, M.F. 3.92K OHM, 1/8W, 1%	R178			1	1	1	1	1		1			
107	062-950	RESISTOR, FIXED, M.F. 2.74K OHM, 1/8W, 1%	R169			1	1	1	1	1		1			
108	042-378	RESISTOR, FIXED, M.F. 8.25K OHM, 1/8W, 1%	R79,141	2	2	2	2	2	2	2		2			
109	066-002	RESISTOR, FIXED, M.F. 23.2K OHM, 1/8W, 1%	R14			1	1	1	1	1		1			
110	062-876	RESISTOR, FIXED, M.F., 215 OHM, 1/8W, 1%	R111				1	1	1	1		1			
111	076-028	RESISTOR, FIXED, C.F. 5.1 OHM, 1/4W, 5%	R168			1	1	1	1	1		1			
112	066-855	RESISTOR, FIXED, C.F. 39 OHM, 1/4W, 5%	R192			1	1	1	1	1		1			
113	066-938	RESISTOR, FIXED, C.F. 47 OHM, 1/4W, 5%	R17,62,82,123,143,153,182,183,191,200	10	10	10	10	10	10	10		10			
114	076-045	RESISTOR, FIXED, C.F. 75 OHM, 1/4W, 5%	R20			1	1	1	1	1		1			
115	066-835	RESISTOR, FIXED, C.F. 82 OHM, 1/4W, 5%	R19,93	2	2	2	2	2	2	2		2			
116	066-812	RESISTOR, FIXED, C.F., 100 OHM, 1/4W, 5%	R1,3,16,18,37,43,61,63,65,69,73,77,85,87,89,92,98,99,110,113,115,116,118,120,125,128,135,140,144,145,155,156,164,179,185,187,189,190,193	39	39	39	39	39	39	39		39			
117	066-813	RESISTOR, FIXED, C.F., 150 OHM, 1/4W, 5%	R167			1	1	1	1	1		1			
118	066-814	RESISTOR, FIXED, C.F., 270 OHM, 1/4W, 5%	R45,101	2	2	2	2	2	2	2		2			
119	066-818	RESISTOR, FIXED, C.F., 470 OHM, 1/4W, 5%	R68,74,121,132	4	4	4	4	4	4	4		4			
120	066-840	RESISTOR, FIXED, C.F. 680 OHM, 1/4W, 5%	R66,126	2	2	2	-	-	-	-		-			
121	066-665	RESISTOR, FIXED, C.F., 1K OHM, 1/4W, 5%	R15,38,58,84,100,109,173,184	8	8	8	8	8	8	8		8			
122	066-715	RESISTOR, FIXED, C.F., 1.2K OHM, 1/4W, 5%	R36			1	1	1	1	1		1			
123	066-824	RESISTOR, FIXED, C.F., 1.5K OHM, 1/4W, 5%	R198			1	1	1	1	1		1			

AMPEX		CORPORATION REDWOOD CITY, CALIFORNIA		CODE IDENT NO. 92739		LIST OF MATERIALS		LM-1405146		SHEET 4		REV P	
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01	-02	-03	-04	-05	-06				
124	066-675	RESISTOR, FIXED, C.F., 1.8K OHM, 1/4W, 5% R4,22,59		3	3	3	3	3	3				
125	066-826	RESISTOR, FIXED, C.F., 2K OHM, 1/4W, 5% R46,105		2	2	2	2	2	2				
126	066-689	RESISTOR, FIXED, C.F., 2.2K OHM, 1/4W, 5% R5,6,21,28,33,42,51,90,117,146,149,157,158,176,194		15	-	-	-	-	-				
127	066-720	RESISTOR, FIXED, C.F., 3.3K OHM, 1/4W, 5% R8,71,75,133,138,148,197		7	7	7	7	7	7				
128	066-827	RESISTOR, FIXED, C.F., 3.9K OHM, 1/4W, 5% R170		1	1	1	1	1	1				
129	066-668	RESISTOR, FIXED, C.F., 4.7K OHM, 1/4W, 5% R39,54,56,76,78,88,94,106,114,134,136,139		12	12	12	12	12	12				
130	066-829	RESISTOR, FIXED, C.F., 6.8K OHM, 1/4W, 5% R29,32,72,137,202		5	-	-	-	-	-				
131	066-711	RESISTOR, FIXED, C.F., 7.5K OHM, 1/4W, 5% R49,102		2	2	2	2	2	2				
132	066-830	RESISTOR, FIXED, C.F., 10K OHM, 1/4W, 5% R11,24,31,55,172		5	5	5	5	5	5				
133	066-865	RESISTOR, FIXED, C.F., 12K OHM, 1/4W, 5% R48,108,165		3	3	3	3	3	3				
134	066-856	RESISTOR, FIXED, C.F., 15K OHM, 1/4W, 5% R10,30,40,47,97,107,171		7	7	7	7	7	7				
135	066-712	RESISTOR, FIXED, C.F., 22K OHM, 1/4W, 5% R2,13,52,103		4	4	4	4	4	4				
136	066-845	RESISTOR, FIXED, C.F., 24K OHM, 1/4W, 5% R9		1	1	1	1	1	1				
137	066-860	RESISTOR, FIXED, C.F., 39K OHM, 1/4W, 5% R50,147		2	2	2	2	2	2				
138	066-717	RESISTOR, FIXED, C.F., 47K OHM, 1/4W, 5% R23,27,81,95,131,163,174,175		8	-	-	-	-	-				
139	066-849	RESISTOR, FIXED, C.F., 100K OHM, 1/4W, 5% R26,96		2	2	2	2	2	2				
140	041-801	RESISTOR, FIXED, CARBON, 22 MEG OHM, 1/4W, 5% R25		1	1	1	1	1	1				
141	066-660	RESISTOR, FIXED, C.F., 22 OHM, 1/4W, 5% R188		1	1	1	1	1	1				
142	066-689	RESISTOR, FIXED, C.F., 2.2K, 1/4W, 5% R5,6,21,28,42,51,90,117,146,149,157,158,176,194		14	14	14	14	14	14				
143	058-990	RESISTOR, VARIABLE, 100 OHM, 1/2W, 20% R12		1	1	1	1	1	1				
144	058-042	RESISTOR, VARIABLE, 200 OHM, 1/2W, 20%, SIDE ADJUST R181		1	1	1	1	1	1				
145	058-993	RESISTOR, VARIABLE, 500 OHM, 1/2W, 20% R53,104		2	2	2	2	2	2				
146	075-156	RESISTOR, VARIABLE, 1K OHM, 1/2W, 20%, SIDE ADJUST R35		1	1	1	1	1	1				
147	058-995	RESISTOR, VARIABLE, 2K OHM, 1/2W, 20% R7		1	1	1	1	1	1				
148	058-998	RESISTOR, VARIABLE, 10K OHM, 1/2W, 20% R34,41,162		3	3	3	3	3	3				
149	058-994	RESISTOR, VARIABLE, 1K OHM, 1/2W, 20% R57		1	1	1	1	1	1				
150	066-829	RESISTOR, FIXED, C.F., 6.8K, 1/4W, 5% R29,32,33,72,137,202		6	6	6	6	6	6				
151	066-717	RESISTOR, FIXED, C.F., 47K, 1/4W, 5% R27,81,95,131,163,174,175		7	7	7	7	7	7				
152	066-864	RESISTOR, FIXED, C.F., 13K, 1/4W, 5% R23		1	1	1	1	1	1				
153	017-158	CRYSTAL, 3.579545 MHz Y1		1	1	1	1	1	1				
154	066-840	RESISTOR FIXED C.F., 680 OHM, 1/2W 5% R36,66,126					3	3	3				
155	119-279	SWITCH, DPDT S1		1	1	1	1	1	1				
156													
157	187-259	TERMINAL, TEST LUG, P.C. REF: TP 1-18		8	18	-	-	-	-				
158	187-259	TERMINAL, TEST LUG, P.C. REF: TP1-17				17	17	17	17				
159	143-981	JACK, P.C. TIP REF: J1-8,10-12,14,15		7	37	-	-	-	-				
160	143-981	JACK, P.C. TIP REF: J1-7,10,11				27	27	27	27				
161	280-130	SPACER, TRANSISTOR, REF: Q3-5,7-11,13-18,20-22,24-32		26	26	26	26	26	26				
162	283-105	SPACER, UNTHREADED			1	1	1	1	1				
163													
164	302-395	STRAP, CABLE		3	3	3	3	3	3				
165													



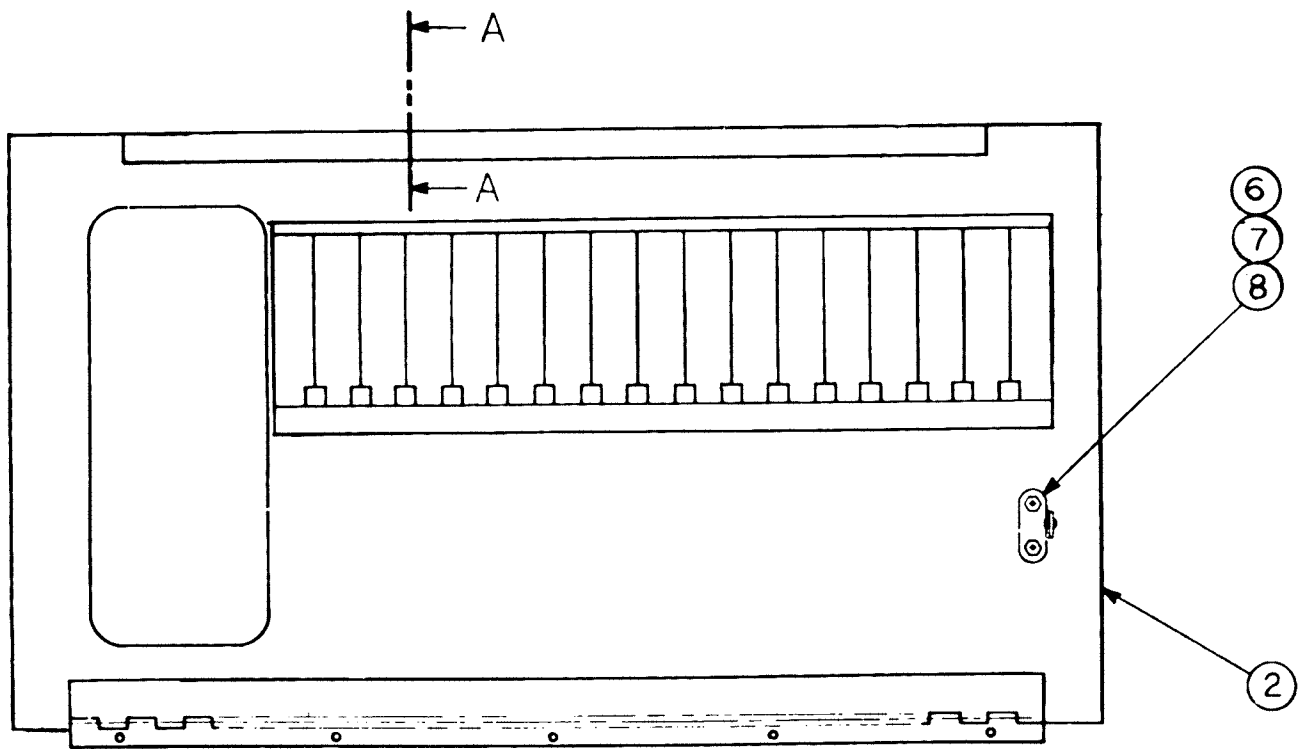
Assembly No. 1405146-06P. Video Processor PWA, A16



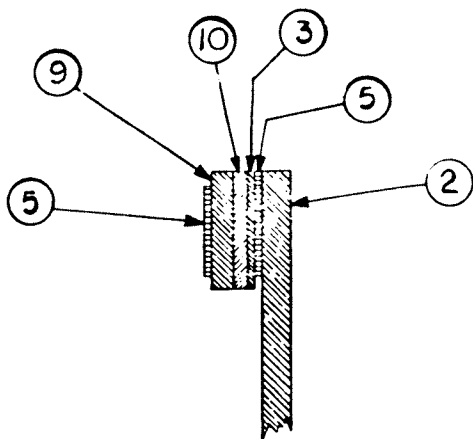
3-137/3-138

REV. D

[illegible]



REAR VIEW



SECTION A-A

A/R	10	029-017	MAGNET, STRIP
I	9	1402317-AA	PLATE
I	8	530-297	SUPPORT
2	7	501-009	WASHER, PLAIN, #6
2	6	496-005	NUT, KEPS, 6-32
A/R	5	225-183	TAPE, ADHESIVE, .38WD.
I	4	6000051-01	TRADEMARK
I	3	1402317-AB	PLATE
I	2	1402327-03	DOOR
01	ITEM NO.	PART NUMBER	DESCRIPTION

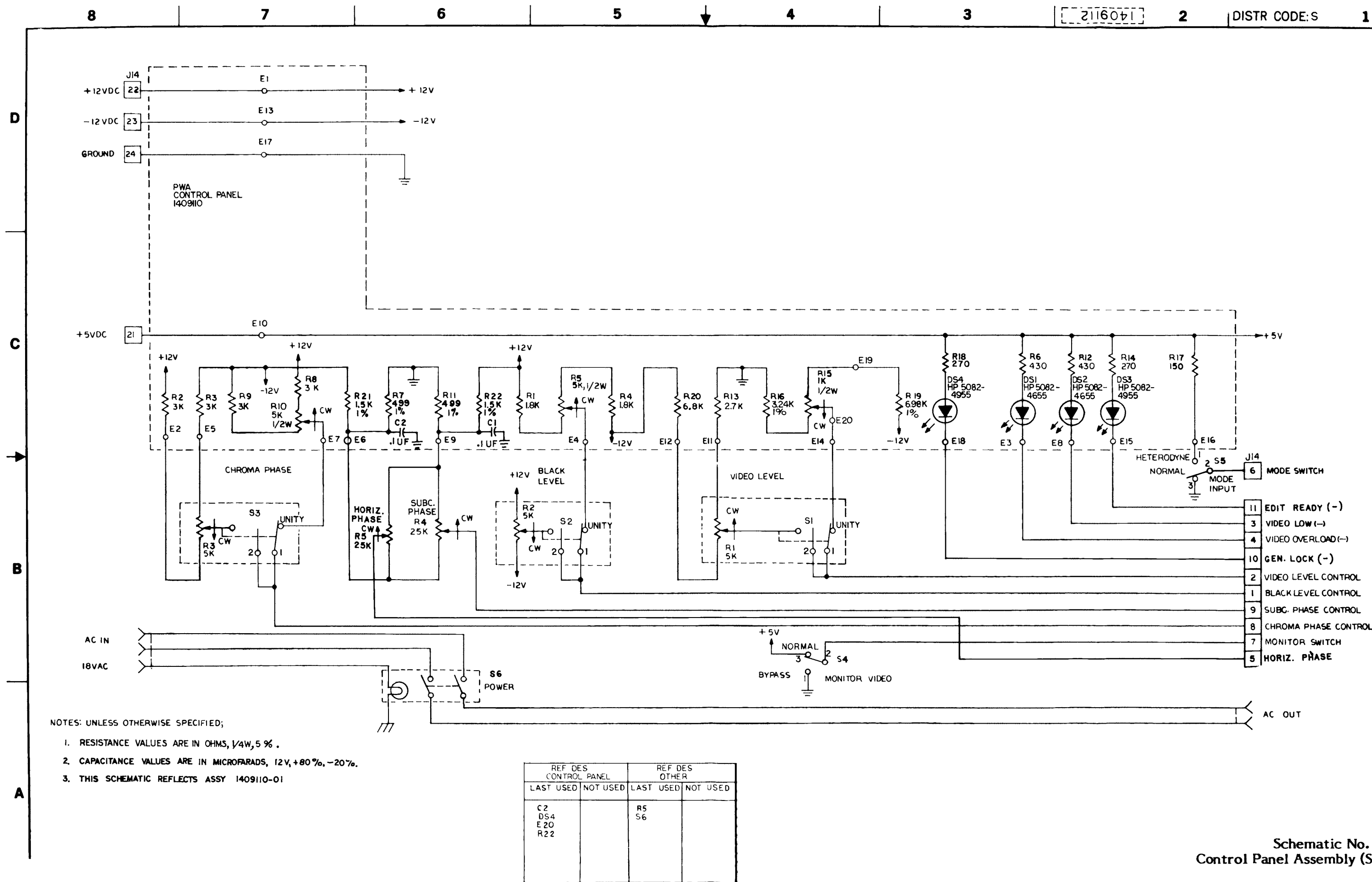
Assembly No. 1405116-01C. Door Assembly

1409129-01

CONTROL PANEL ASSEMBLY (STANDALONE)
NEXT HIGHER ASSEMBLY 1409135, 1409136

REV. B

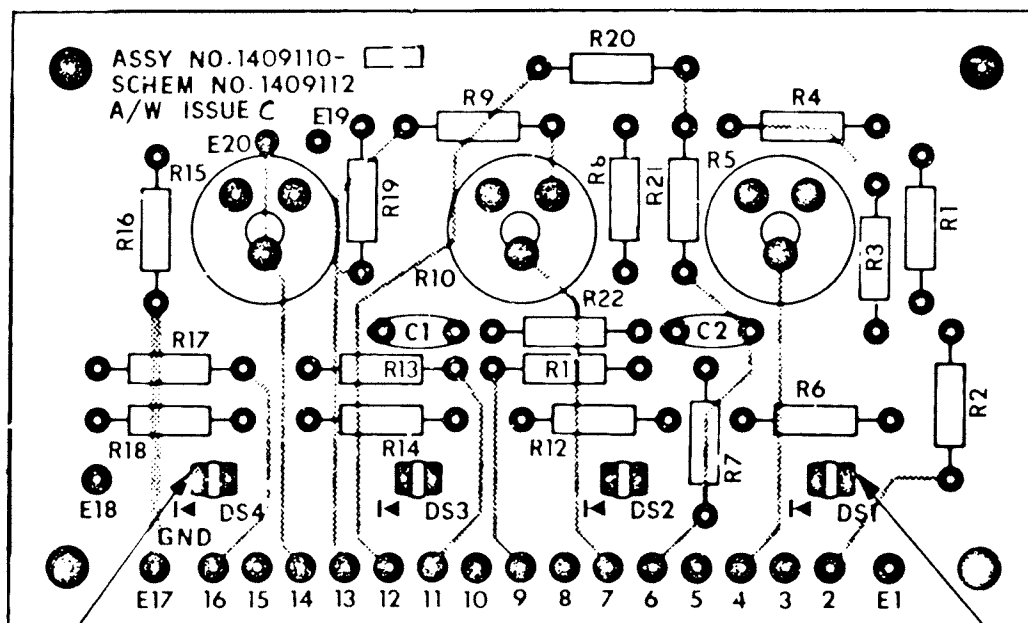
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER									
				-01									
1	1378596-01	PLATE, DRESS, SWITCH	REF: S4,5	2									
2													
3	1409112	SCHEMATIC		(B)									
4	1405113-01	PANEL CONTROL		1									
5	1409168-01	HARNESS		REF									
6	1405160-01	PLATE, SWITCH MTG.	REF: S4,5,R4,5	1									
7	1409110-01	PWA CONTROL PANEL		1									
8	6000002-20	KNOB	REF: R1,2,3	3									
9													
10													
11	075-221	RESISTOR, VAR., CARBON, 25K OHMS, 1/2W, 16 TURNS	R4,5	2									
12	058-863	RESISTOR, VAR., W/SWITCH, CARBON 5K OHMS, 1/2W, 20T	S1,2, S3,R1,2,3	3									
13													
14	119-395	SWITCH, TOGGLE, SPDT	S4,55	2									
15	119-433	SWITCH, P.B., POWER, ILLUMINATED	S6	1									
16													
17													
18	166-226	CONNECTOR PART, CONTACT PIN, 26-24 AWG		15									
19	167-027	CONNECTOR PART, BODY, PLUG, RECT., 24-POS	J14	1									
20	501-186	WASHER, PLAIN #4		8									
21	280-107	SPACER, THRD, PLAIN, 4-40 X .75 LG.	(REF. PWA MTG.)	4									
22	280-592	SPACER, PLAIN, THRD, HEX, 4-40 X .50 LG.	(REF. SW. PLATE)	4									
23	502-077	WASHER, LOCK, I.T. 3/8 I.D.	REF: R1,2,3	3									
24	472-451	SCREW, MACH, PAN HD, X-REC, 2-56 X .188 LG		4									
25	473-324	SCREW, MACH, ASSEMBLED WSHR, 4-40 X .250 LG		8									
26													
27	492-457	NUT, HEX 3/8-32	REF: R1,2,3	6									
28	502-023	WASHER, LOCK, I.T., #2		4									
29	502-024	WASHER, LOCK., I.T. #4		4									
30	503-006	WASHER, PLAIN, FIBER, .38 ID	REF: R1,2,3	3									
31													
32	600-161	SLEEVING, TEFLON, #24		A/R									
33	615-090	WIRE, SOLID, BARE, #24		A/R									
34	302-335	STRAP, CABLE		A/R									
35		WIRE, STRANDED INSULATED, #24		A/R									
36	600-043	SLEEVING, PVC, FLEXIBLE, BLK, .33 ID		A/R									



CONTROL PANEL PWA
NEXT HIGHER ASSEMBLY 1409131, 1409129

REV. B

[illegible]



11 REF: DS3,4
29
30

10 REF: DS1,2
29
30

Assembly No. 1409110-01B. Control Panel PWA

STANDALONE RACK MOUNT KIT
NEXT HIGHER ASSEMBLY 1409000

REV. D

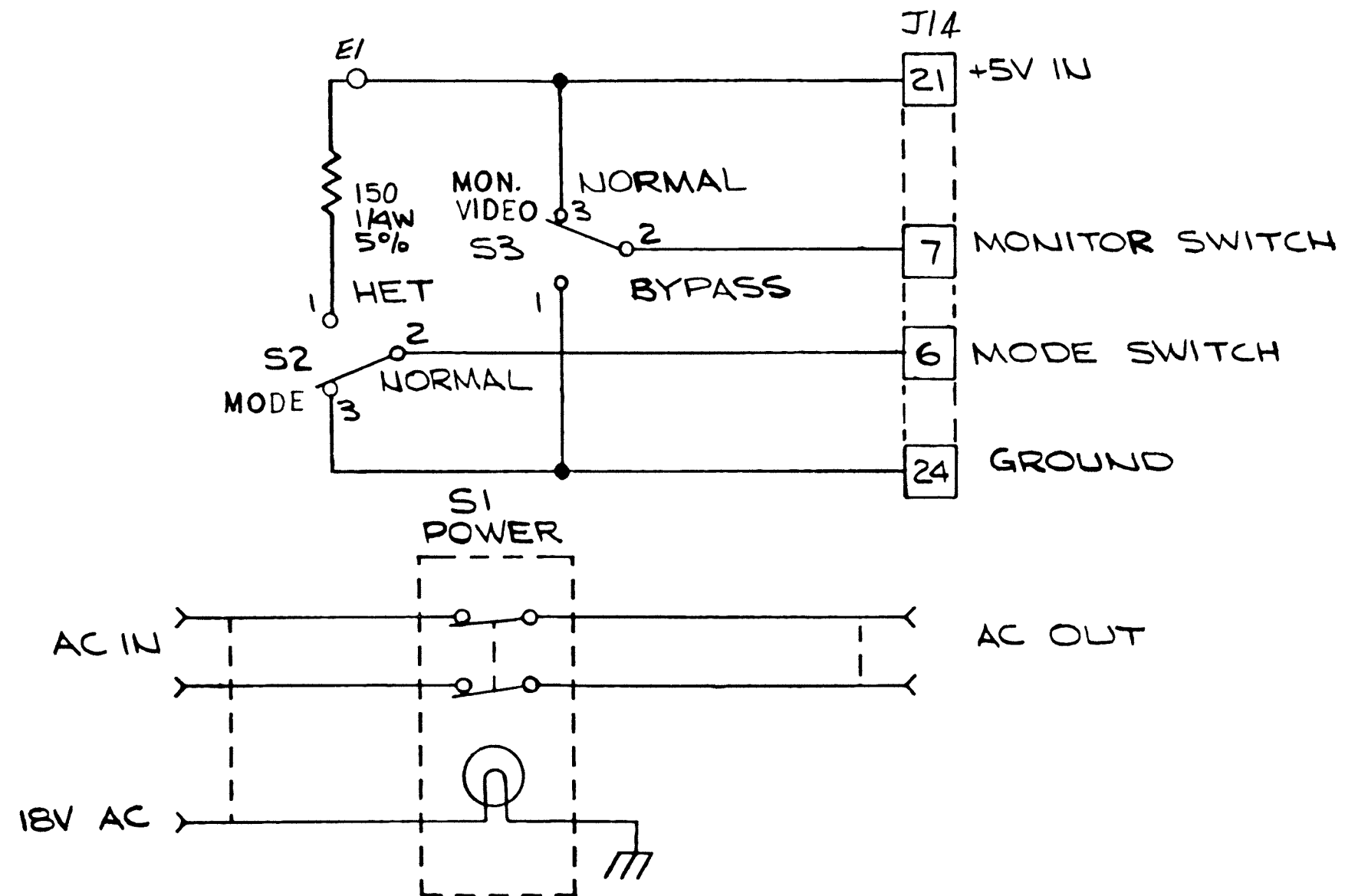
[illegible]

CONSOLE MOUNT KIT
NEXT HIGHER ASSEMBLY 1409000

REV. R

[illegible]

[illegible]



1. THIS SCHEMATIC REFLECTS ASSY. 1405109-02.

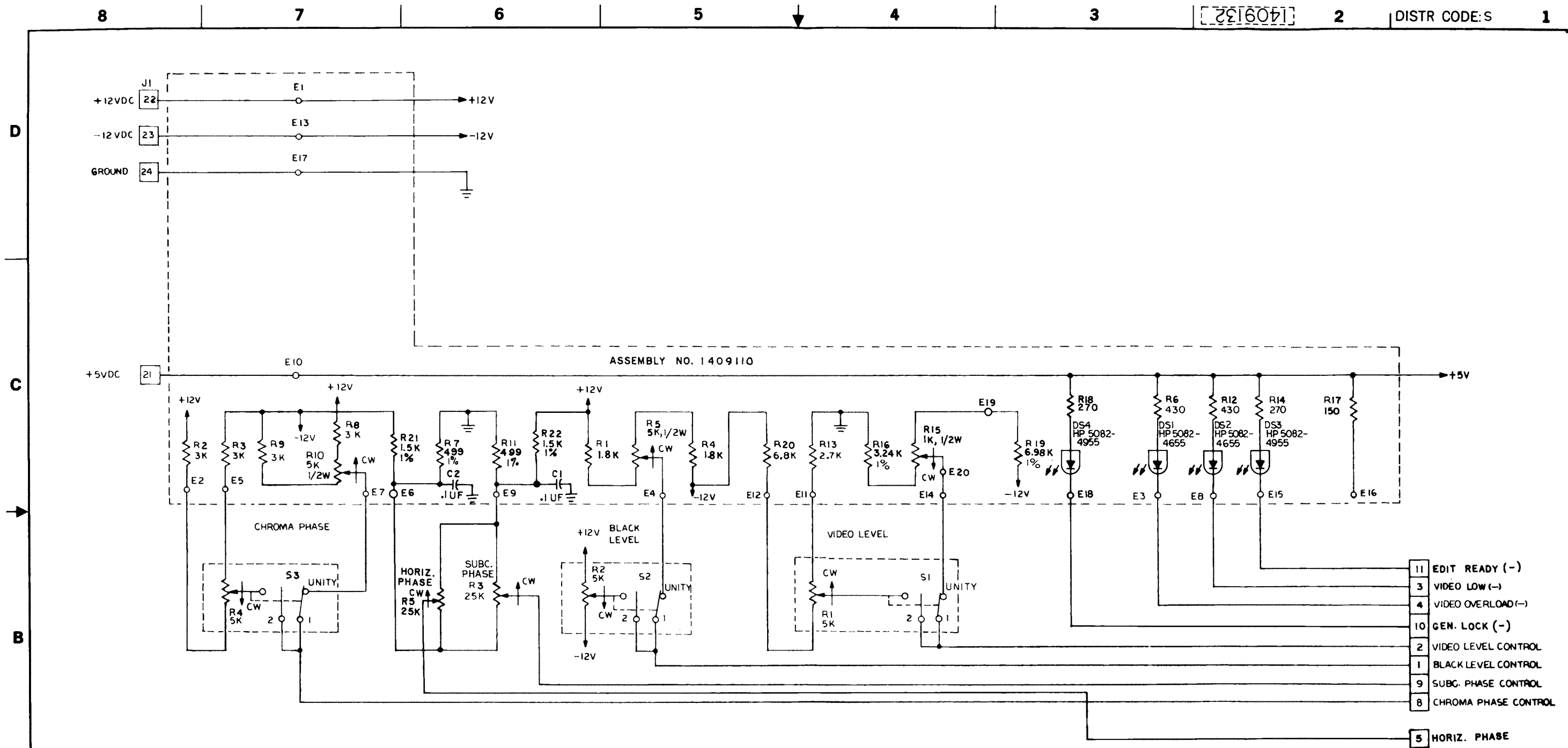
Schematic No. 1405111A.
Control Panel Assembly

1409131-01

TBC REMOTE PANEL ASSEMBLY
NEXT HIGHER ASSEMBLY 1409130

REV. P

ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER											
				-01											
1															
2															
3	1409110-01	PRINTED WIRING ASSEMBLY		1											
4	1400904-03	PANEL, T.B.C. CONTROL		1											
5	1400908-01	BRACKET, POT, & CONNECTOR MTG		1											
6															
7	1409132	SCHEMATIC, T.B.C. REMOTE		(A)											
8															
9															
10	6000002-20	SKIRED KNOB, 1/2" SERIES FOR 1/8" SHAFT REF: R1,2,4		3											
11	6000035-01	LABEL, IDENTIFICATION		1											
12															
13															
14	058-863	RESISTOR, VAR, W/SWITCH, .5W, 5K OHM, 20% R1,2,4		3											
15	075-221	RESISTOR, VAR, CARBON 16T., .75W, 25K OHM, 10% R3,5		2											
16	166-200	CONNECTOR PART, CONTACT, PIN, 22-20 AWG REF: J1		A/R											
17	166-226	CONNECTOR PART, CONTACT, PIN, 26-24 AWG REF: J1		A/R											
18	167-027	CONNECTOR PART, BODY, RECPT, RECT, 24 POSISITONS J1		1											
19															
20	302-335	STRAP, CABLE, .750 MAX BUNDLE DIA, .095 WD, 4.00 LG		A/R											
21															
22															
23	492-457	NUT, HEX, FINISHED, 3/8-32 REF: R1,2,4		6											
24	496-004	NUT, HEX, CAPTIVE WASHER, 4-40		2											
25	501-008	WASHER, PLAIN, .125 ID, (#4) .312 OD, .032 THK		4											
26	501-627	WASHER, PLAIN, .625 OD, .020 THK, BRASS, NI PLATE REF: R1,2,4		3											
27	502-077	WASHER, LOCK, INTERNAL TOOTH, (3/8) REF: R1,2,4		3											
28	615-004	WIRE, SOLID, UNINSULATED, 24 AWG		A/R											
29	280-107	SPACER, THRD, PLAIN, 4-40 X .75 LG (REF. PWA MTG)		6											
30															
31		WIRE, STRANDED, 24 AWG		A/R											
32	502-017	WASHER, LOCK, EXT. TOOTH, 1/4" R3,5		2											



- NOTES: UNLESS OTHERWISE SPECIFIED;
1. RESISTANCE VALUES ARE IN OHMS, 1/4W, 5%.
 2. CAPACITANCE VALUES ARE IN MICROFARADS, 12V, +80%, -20%.
 3. THIS SCHEMATIC REFLECTS ASSY 1409131 - 01.

REFERENCE DESIGNATIONS	
LAST USED	NOT USED
C2	
DS4	
E20	
R22	
S3	

Schematic No. 1409132A.
TBC Remote Panel Assembly

[illegible]

A/D CLOCK DRIVER KIT
NEXT HIGHER ASSEMBLY 1460105

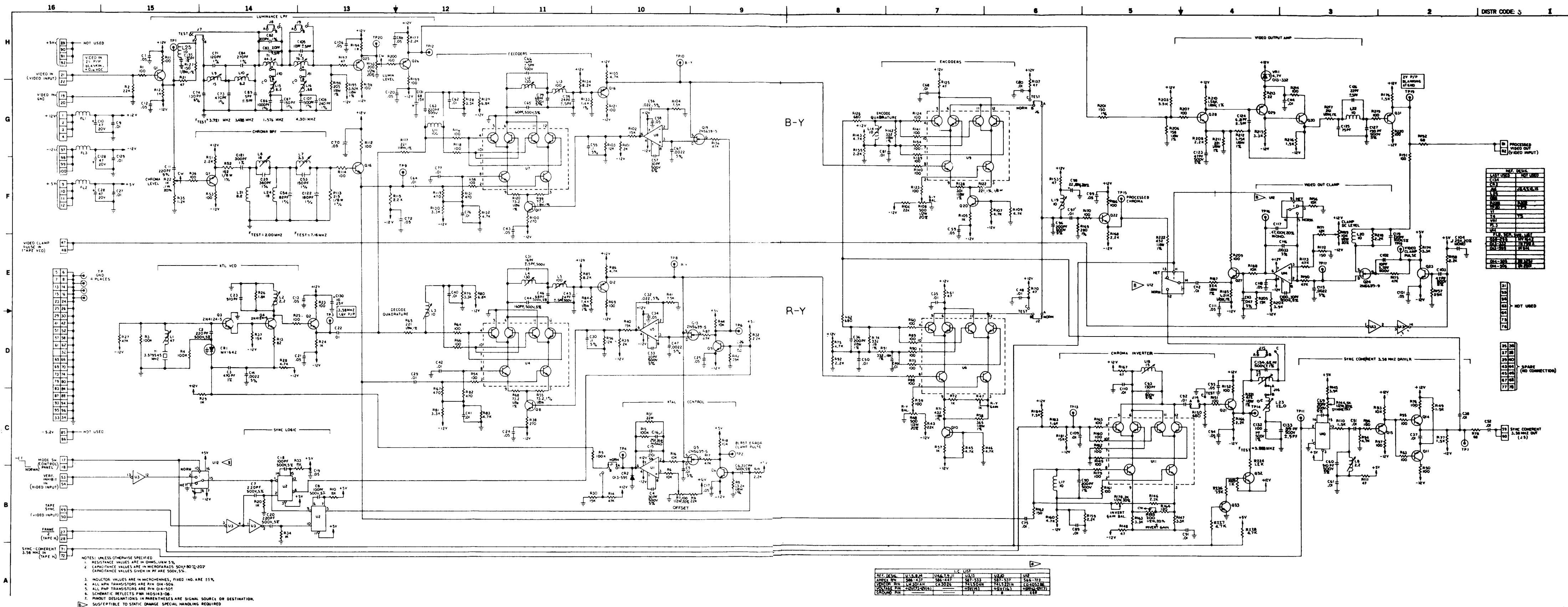
REV. -

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
MULTIBURST TPAP KIT
NEXT HIGHER ASSEMBLY 1460105

REV. -

[illegible]



Schematic No. 1461809—
Multiburst Trap Kit

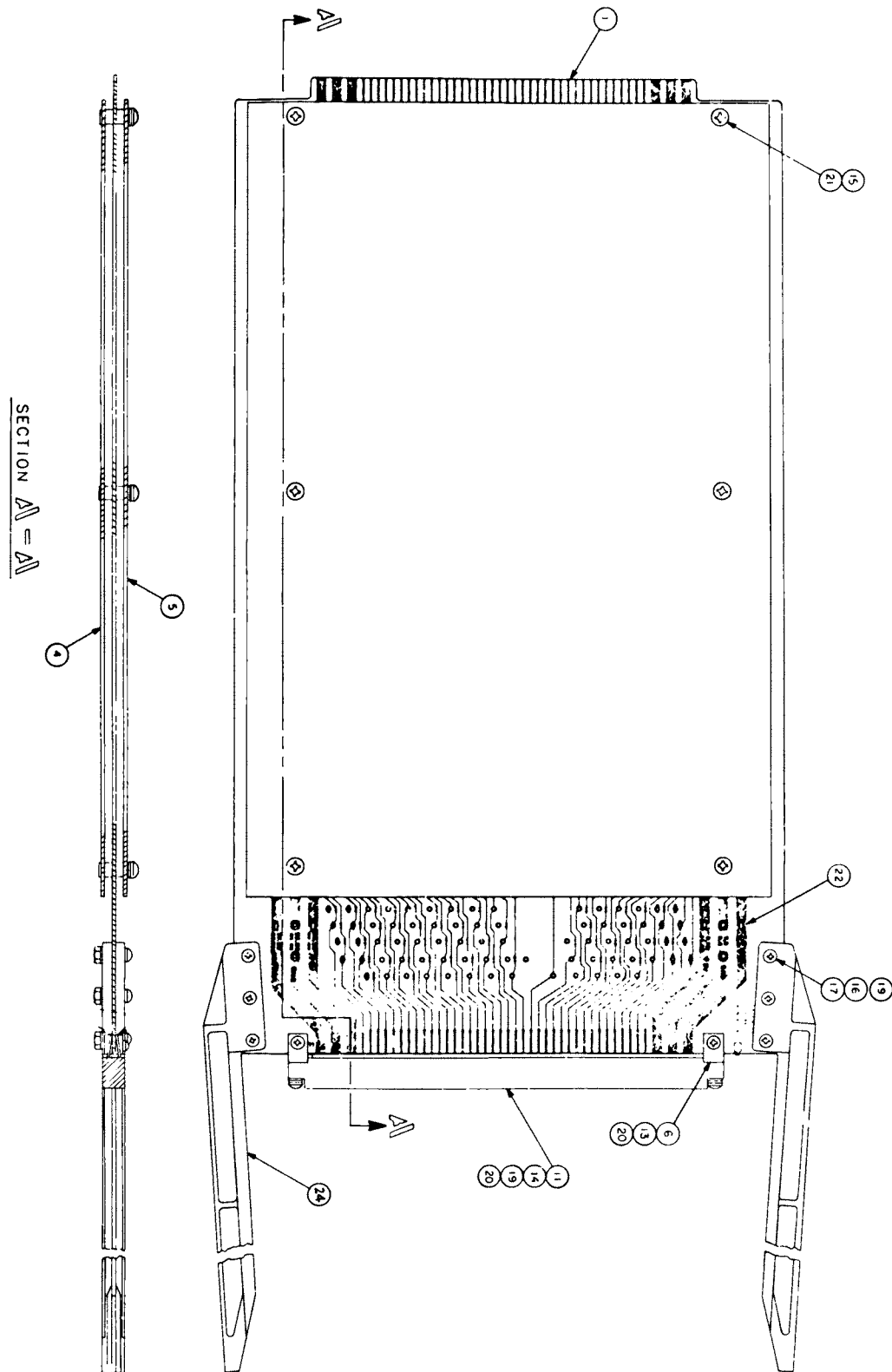
ITEM NO.	PART NUMBER	DESCRIPTION	REF DESIG	QTY REQD PER DASH NUMBER											
				-02											
1	1460204-02	PWA, VPR-20/TBC-2 INTERFACE			1										
2	1460206	SCHEMATIC, VPR-20/TBC-2 INTERFACE	REV (B)	A	1										
3	1460188-01	INSULATOR, VPR-20 INTERFACE			1										
4	1460226	INSTALLATION INSTRUCTIONS			1										
5	496-004	NUT, HEX, CAPTIVE WASHER, 4-40			1										
6	473-324	SCREW, MACHINE, PAN HD, XREC DRIVE, 4-40 X .250 LG.			1										
7	472-455	SCREW, MACHINE, PAN HD, XREC DRIVE, 2-56 X .483 LG.			2										
8	492-007	NUT, HEX, FINISHED, 2-56			2										
9	502-001	WASHER, LOCK, HELICAL SPRING, #2			2										
10	501-184	WASHER, PLAIN, SM PATTERN, #2			4										
11	611-487	WIRE, STRANDED, INSULATED, 26AWG	BLACK	A/R	A/R										
12	617-033	WIRE, STRANDED, INSULATED, 26AWG	RED	A/R	A/R										
13	617-035	WIRE, STRANDED, INSULATED, 26AWG	YELLOW	A/R	A/R										
14	617-037	WIRE, STRANDED, INSULATED, 26AWG	BLUE	A/R	A/R										
15	617-034	WIRE, STRANDED, INSULATED, 26AWG	ORANGE	A/R	A/R										
16	617-036	WIRE, STRANDED, INSULATED, 26AWG	GREEN	A/R	A/R										
17	501-169	WASHER, PLAIN, SM PATTERN, #4			2										
18	502-403	WASHER, NYLON, #4			2										
19	1460209-01	BRACKET, SWITCH			1										
20	120-639	SWITCH, SPDT	S1		1										
21	1460023	LABEL, MODIFICATION			1										
22	1460228-01	LABEL, P.W.A. LOCATOR			1										
23															
24															
25															
26															
27		 APPROXIMATELY 14" IN LENGTH.													
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															

MISCELLANEOUS PARTS KIT, NTSC
MISCELLANEOUS PARTS KIT, PAL/SECAM
MISCELLANEOUS PARTS KIT, PAL-M
NEXT HIGHER ASSEMBLY 1409001

[illegible]

EXTENDER BOARD ASSEMBLY
NEXT HIGHER ASSEMBLY 1409153

[illegible]



Assembly No. 1402453-03J. Extender Board Assembly

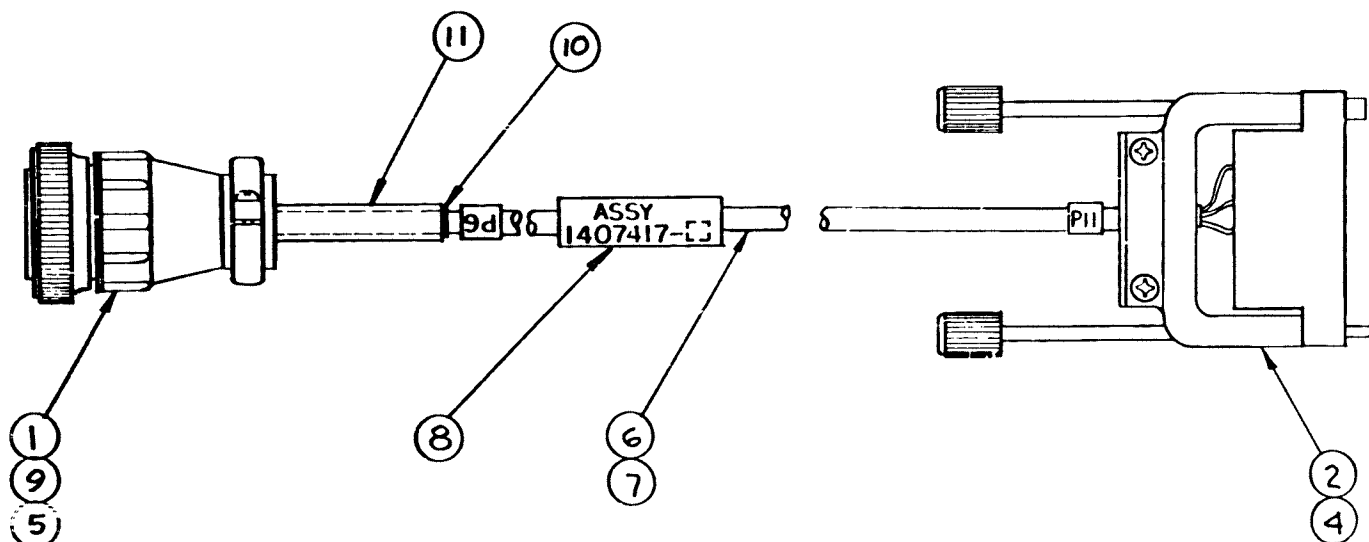
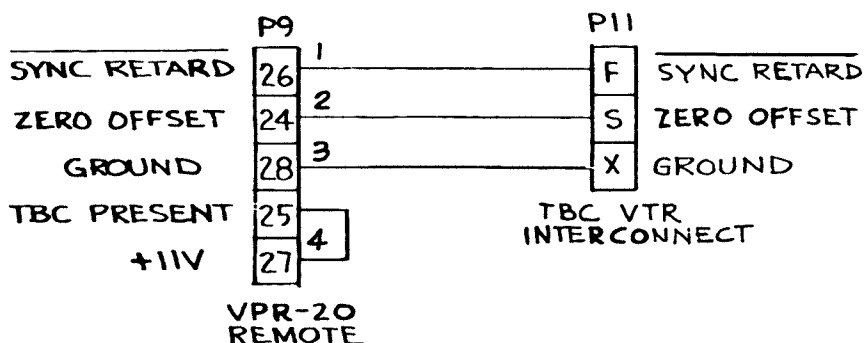


TABLE 3	
VERSION	L
AB	6' ± 2"



1	11	262-003	BUSHING, SLEEVE, .312 I.D.
1	10	262-002	BUSHING, SLEEVE, .220 I.D.
5	9	167-477	CONTACT, PIN, 24-20 AWG
A/R	8	600-092	SLEEVING, SHRINK, BLACK
A/R	7	600-010	SLEEVING, VINYL
A/R	6		WIRE, STRANDED 24 AWG
1	5	167-092	CLAMP, CONNECTOR
3	4	169-835	CONTACT, SOCKET, 24-26 AWG
-	3	167-721	CONTACT, PIN
1	2	166-857	CONNECTOR, RECT (34 POS)
1	1	167-487	CONNECTOR, CIR (28 POS)
AB	ITEM NO.	PART NUMBER	DESCRIPTION

Assembly No. 1407417-AB-D. VPR-20/TBC Interface Adapter Cable

APPENDIX A

INTEGRATED CIRCUITS

Table A-1. Integrated Circuit Ampex Part Numbers

AMPEX PART NO.	MANUFACTURER'S PART NO.	MANUFACTURER	PAGE NO.
586-048	F μ 711HM	Fairchild	A-1
586-075	MC7400	Motorola	A-1
586-076	SN7410N	Texas Instruments	A-1
586-077	SN7420N	Texas Instruments	A-2
586-108	SN7474	Texas Instruments	A-2
586-109	MC7402	Motorola	A-2
586-121 (See 586-048)			A-1
586-124	F μ 710HC	Fairchild	A-3
586-292 (See 586-688)			A-6
586-325	SN7405	Texas Instruments	A-3
586-326	MC7404	Motorola	A-4
586-437	LM301A	National Semiconductor	A-4
586-447	CA3026	RCA	A-5
586-623	747DM	Fairchild	A-5
586-688	SN74H04N	Texas Instruments	A-6
586-705	SN7486	Texas Instruments	A-6
586-753	SN75451BP	Texas Instruments	A-6
586-759	SN7408N	Texas Instruments	A-7
586-764 (See 586-623)			A-5
586-778	CA3054	RCA	A-7
586-830	SN74S00N	Texas Instruments	A-7
586-831 (See 586-688)			A-6
586-903	FC74157PC	Fairchild	A-8
586-905	SN72558P	Texas Instruments	A-8
586-918	SN7432	Texas Instruments	A-9
586-938 (See 586-753)			A-6
587-018	SN74S10N	Texas Instruments	A-9
587-052 (See 587-093)			A-10
587-093	N2502B	Signetics	A-10
587-095 (See 586-108)			A-2
587-131	MC10124L	Motorola	A-11

Table A-1. Integrated Circuit Ampex Part Numbers (Continued)

AMPEX PART NO.	MANUFACTURER'S PART NO.	MANUFACTURER	PAGE NO.
587-133	MC10116L	Motorola	A-12
587-152	SN74S175N	Texas Instruments	A-12
587-158	74S174PC	Fairchild	A-13
587-163	MC1330P	Motorola	A-14
587-164	MC1350P	Motorola	A-15
587-266	SN74279	Texas Instruments	A-15
587-277 (See 586-109)			A-2
587-283 (See 586-076)			A-1
587-285	MC10125L	Motorola	A-16
587-287	NE529K	Signetics	A-16
587-387 (See 586-108)			A-2
587-410	SN74LS139	Texas Instruments	A-17
587-431	SN74221	Texas Instruments	A-17
587-472	SN74S124	Texas Instruments	A-18
587-483	MC10135	Motorola	A-19
587-494	CA3096AE	RCA	A-20
587-510 (See 586-075)			A-2
587-514	SN74LS51N	Texas Instruments	A-20
587-523 (See 586-918)			A-9
587-533 (See 586-688)			A-6
587-534 (See 586-759)			A-7
587-535 (See 587-797)			A-26
587-536	74LS193	Fairchild/Texas Instruments	A-21
587-537 (See 587-431)			A-17
587-541 (See 587-776)			A-25
587-660	LM339M	National Semiconductor	A-21
587-682	MC3403P	Motorola	A-22
587-705	SN74LS670	Texas Instruments	A-22
587-723	CD4053AE	RCA	A-23
587-746 (See 586-705)			A-22
587-750	74LS02	Fairchild	A-23
587-757 (See 587-152)			A-12
587-758 (See 587-266)			A-15
587-760 (See 586-903)			A-8
587-765 (See 586-077)			A-2
587-770	SN74LS174N	Texas Instruments/ National Semiconductor	A-24
587-771	78L05AWC	Fairchild	A-24
587-772	SN74LS161	Texas Instruments	A-25
587-773	SN74L163N	Texas Instruments	A-25
587-775 (See 587-152)			A-12
587-776	SN74LS113N	Texas Instruments	A-25

Table A-1. Integrated Circuit Ampex Part Numbers (Continued)

AMPEX PART NO.	MANUFACTURER'S PART NO.	MANUFACTURER	PAGE NO.
587-777	SN74LS153N	Texas Instruments	A-26
587-778	SN74LS30N	Texas Instruments	A-26
587-797	SN74LS253	Texas Instruments	A-26
587-814	SN74LS283N	Texas Instruments	A-27
587-890 (See 586-124)			A-3
587-894	AM2502PC	Advanced Micro Device	A-27
587-895	74LS164	Fairchild	A-28
587-896	DAC08CZ	Precision Monolithic	A-28
587-901	SN74LS298N	Texas Instruments	A-29
587-902 (See 586-325)			A-3
587-952	SN74LS27N	Texas Instruments	A-29
589-007	SN74S163N	Texas Instruments	A-30
589-011	MMH0026GH	Motorola	A-30
589-016	SN74LS160N	Texas Instruments	A-31
589-024	MM5321N	National Semiconductor	A-31
589-180	CA3140T	RCA	A-32
589-331	SN74LS273N	Texas Instruments	A-32
589-334	SN74LS393N	Texas Instruments	A-33
589-427	TL082CP	Texas Instruments	A-33
589-441	LF356N	National Semiconductor	A-34
589-482	93L422	Fairchild	A-34
589-555	AM686HC	Advanced Micro Device	A-35
589-591	SN74LS390N	Texas Instruments	A-35
589-685	TDS5233	TRW Systems	A-36
589-802 (See 587-287)			A-16
589-813 (See 586-075)			A-1
589-814 (See 586-688)			A-6
589-815 (See 586-918)			A-9
589-816 (See 586-076)			A-1
589-818 (See 586-077)			A-2
589-820 (See 586-108)			A-2
589-824 (See 587-777)			A-26
589-825 (See 586-903)			A-8
589-830 (See 587-770)			A-24
589-831 (See 587-152)			A-12
589-832 (See 587-536)			A-21
589-837 (See 586-830)			A-7
589-838 (See 586-688)			A-6
589-840 (See 587-018)			A-9
589-846 (See 586-108)			A-2
589-929 (See 586-325)			A-3
589-931 (See 587-778)			A-26

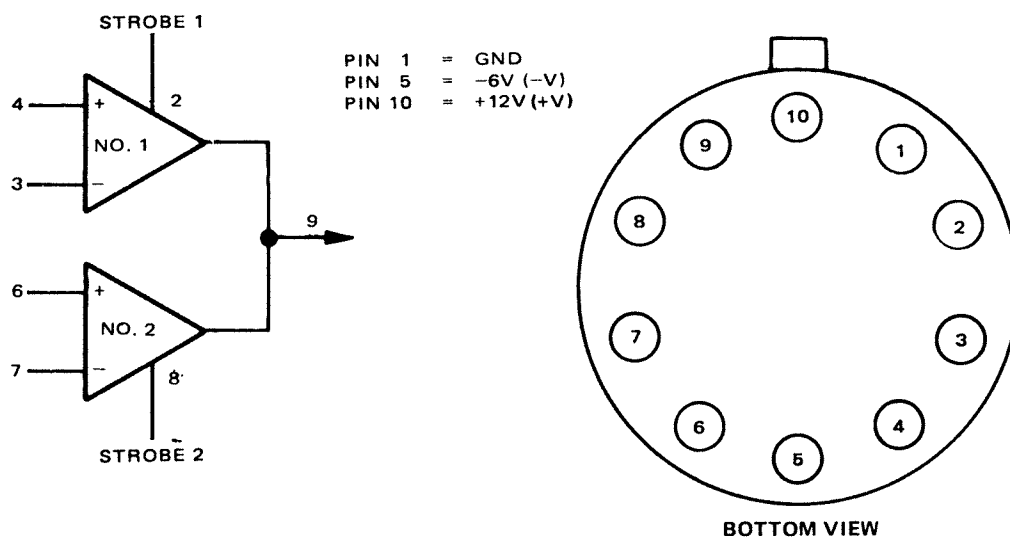
Table A-1. Integrated Circuit Ampex Part Numbers (Continued)

AMPEX PART NO.	MANUFACTURER'S PART NO.	MANUFACTURER	PAGE NO.
589-932 (See 587-776)	FC41PC	Fairchild	A-25
589-933 (See 587-772)			A-25
589-934 (See 587-431)			A-17
589-935 (See 589-334)			A-33
589-937 (See 587-158)			A-13
589-938 (See 587-152)			A-12
590-134 (See 587-770)			A-24
590-327 (See 587-287)			A-16
590-328 (See 586-918)			A-9
590-329 (See 587-797)			A-26
590-332 (See 587-750)			A-23
590-333 (See 587-773)			A-25
590-335 (See 589-331)			A-32
590-336 (See 589-591)			A-35
590-443 (See 586-109)			A-2
590-445 (See 589-016)			A-31
590-449 (See 587-660)			A-21
590-450 (See 587-723)			A-23
590-464 (See 587-285)			A-16
590-533			A-36
590-538 (See 586-759)			A-7
590-543 (See 587-133)			A-12
590-547 (See 587-472)			A-18
590-548 (See 587-514)			A-20
590-552 (See 587-266)			A-15
590-553 (See 586-124)			A-3
590-554 (See 587-901)			A-29
590-566 (See 587-483)			A-19
590-568 (See 587-776)			A-25
590-601 (See 589-441)			A-34
590-602 (See 589-427)			A-33
590-604 (See 589-007)			A-30
590-606 (See 587-814)			A-27
590-611 (See 586-623)			A-5
590-612 (See 586-905)			A-8
590-615 (See 587-410)			A-17
590-620 (See 586-705)			A-22
590-621 (See 587-093)			A-10

FAIRCHILD
F μ 711 HM

AMPEX
586-048

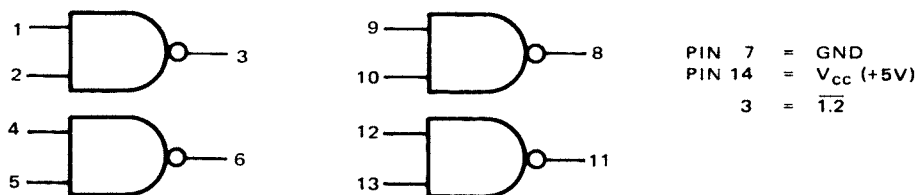
DUAL
COMPARATOR



MOTOROLA
MC 7400

AMPEX
586-075

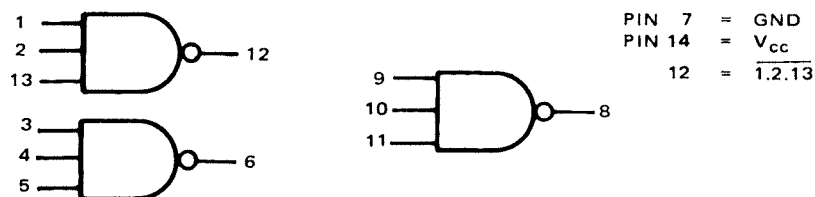
QUAD 2-INPUT
NAND GATE



TEXAS INSTRUMENTS
SN 7410 N

AMPEX
586-076

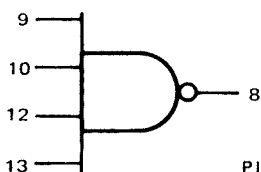
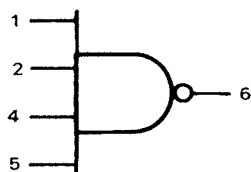
3-INPUT
NAND GATE



TEXAS INSTRUMENTS
SN 7420 N

AMPEX
586-077

4-INPUT
NAND GATE

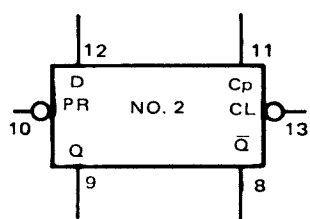
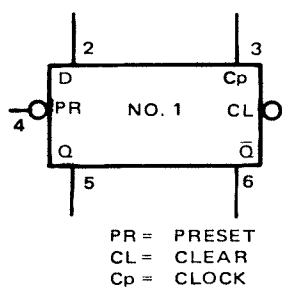


PIN 7 = GND
PIN 14 = V_{cc}
6 = $\overline{1.2.4.5}$

TEXAS INSTRUMENTS
SN 7474

AMPEX
586-108

DUAL D-TYPE EDGE-
TRIGGERED FLIP-FLOP



PIN 7 = GND
PIN 14 = V_{cc}

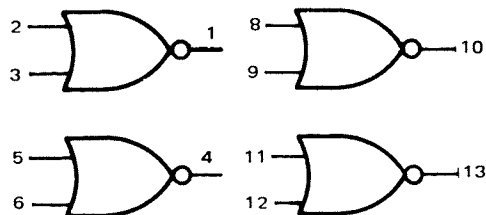
t_n	t_{n+1}			
D	Q	PR	CL	Q
L	L	L	H	H
H	H	H	L	L
		L	L	ND

$t_n + 1$ IS TIME AFTER POSITIVE
TRANSITION OF CLOCK

MOTOROLA
MC 7402

AMPEX
586-109

QUAD 2-INPUT
NOR GATE

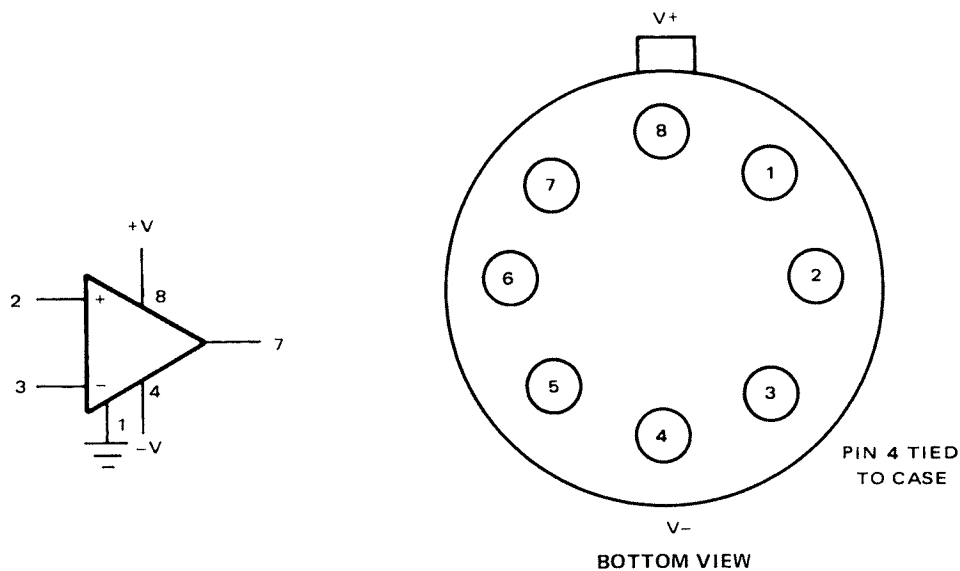


1 = $\overline{2+3}$
PIN 7 = GND
PIN 14 = V_{cc} (5V)

FAIRCHILD
F μ 710 HC

AMPEX
586-124

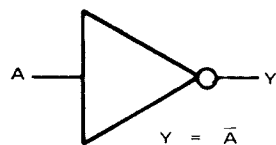
HIGH-SPEED
DIFFERENTIAL
COMPARATOR



TEXAS INSTRUMENTS
SN 7405 N

AMPEX
586-325

HEX INVERTER
OPEN COLLECTOR



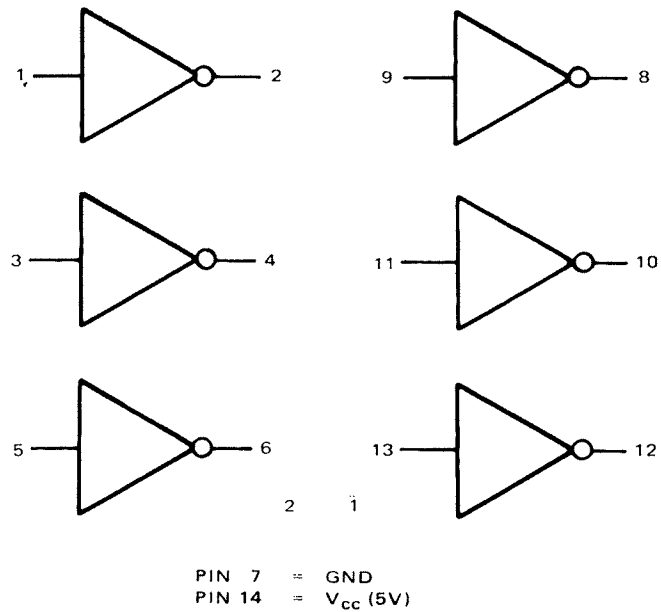
A	1	3	5	9	11	13
Y	2	4	6	8	10	12

PIN 7 = GND
PIN 14 = V_{cc}

MOTOROLA
MC 7404

AMPEX
586-326

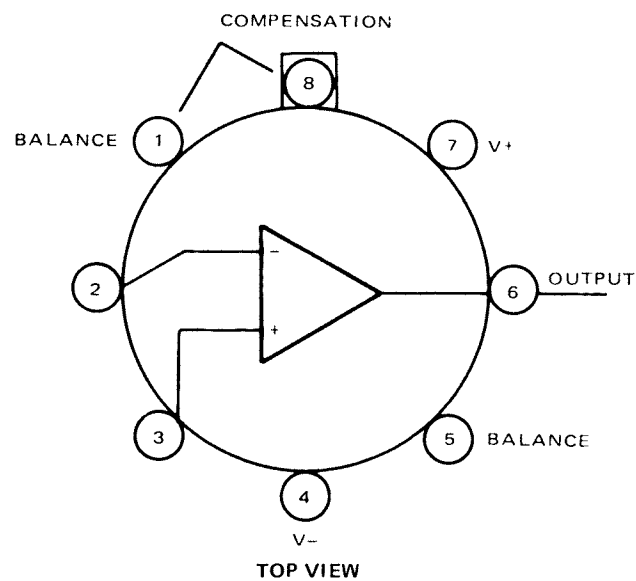
HEX
INVERTER



NATIONAL SEMICONDUCTOR
LM 301 A

AMPEX
586-437

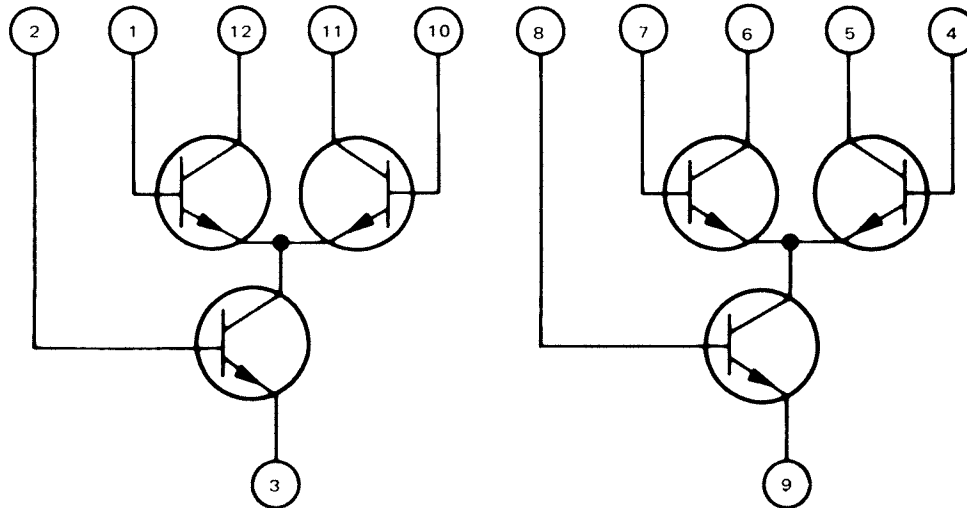
OPERATIONAL
AMPLIFIER



RCA
CA 3026

AMPEX
586-447

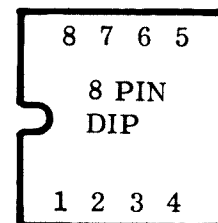
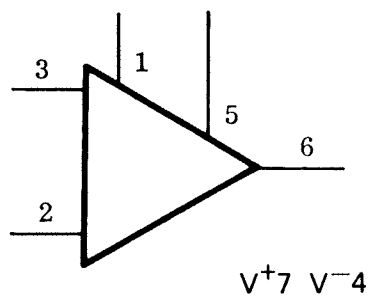
DUAL DIFFERENTIAL
AMPLIFIER

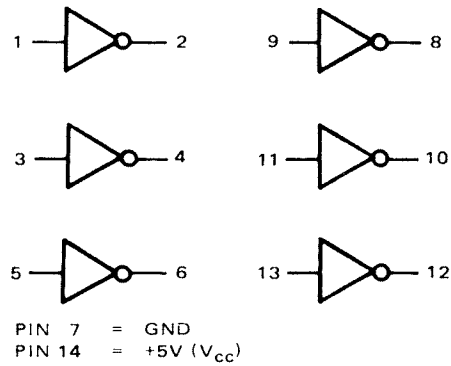


FAIRCHILD
741 TC
747 DM

AMPEX
586-764
586-623

OFFSET NULL

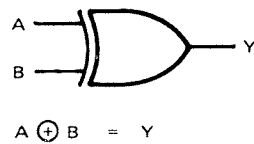




TEXAS INSTRUMENTS
SN 7486

AMPEX
586-705

QUAD
EXCLUSIVE OR GATE



A	B	Y
1	2	3
4	5	6
9	10	8
12	13	11

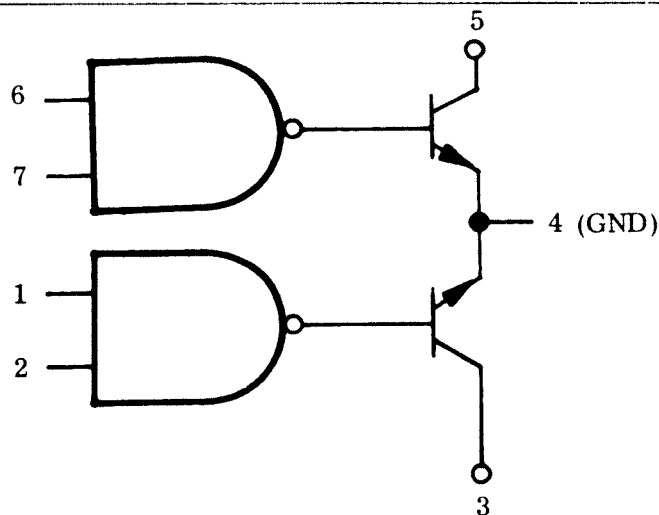
PIN 7 = GND
PIN 14 = V_{cc}

TEXAS INSTR

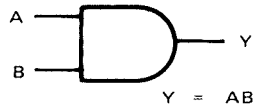
AMPEX
586-753
586-938

SN 75451BP

DUAL PERIPHERAL LINE DRIVER
("AND")



V_{CC} 8
GND 4



A	1	4	9	12
B	2	5	10	13
Y	3	6	8	11

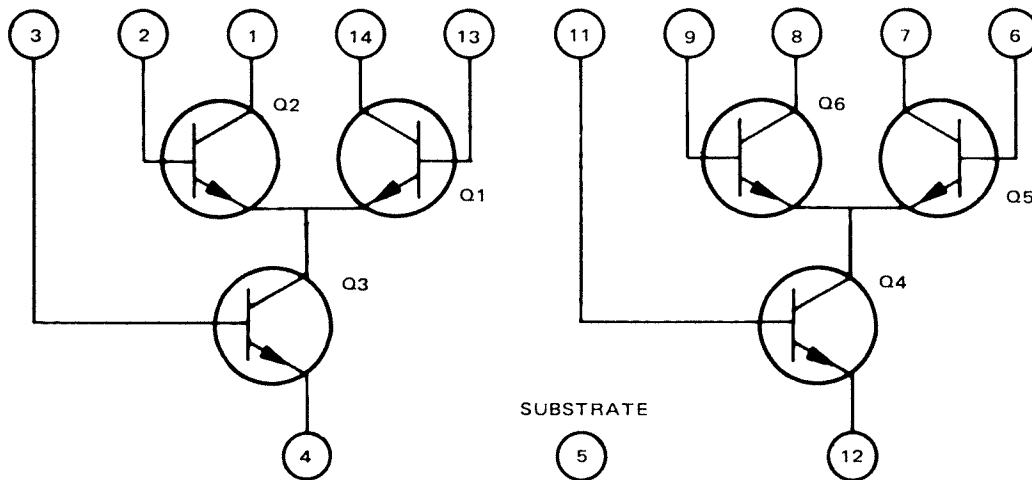
PIN 7 = GND

PIN 14 = V_{CC}

RCA
CA 3054

AMPEX
586-778

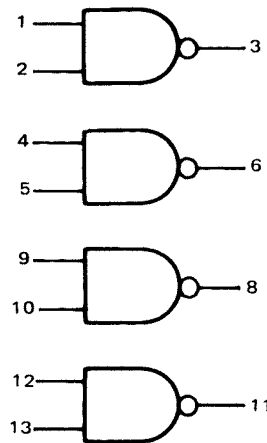
TRANSISTOR
ARRAY



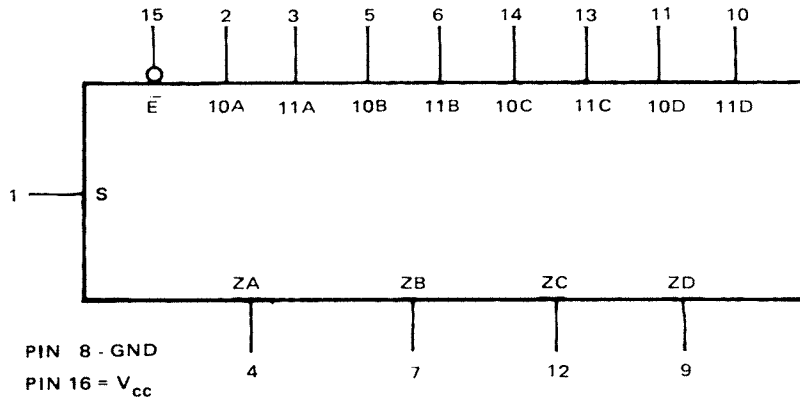
TEXAS INSTRUMENTS
SN 74S00N

AMPEX
586-830

QUAD 2-INPUT
NAND GATE



PIN 7 = GND
PIN 14 = $+5V (V_{CC})$



TRUTH TABLE

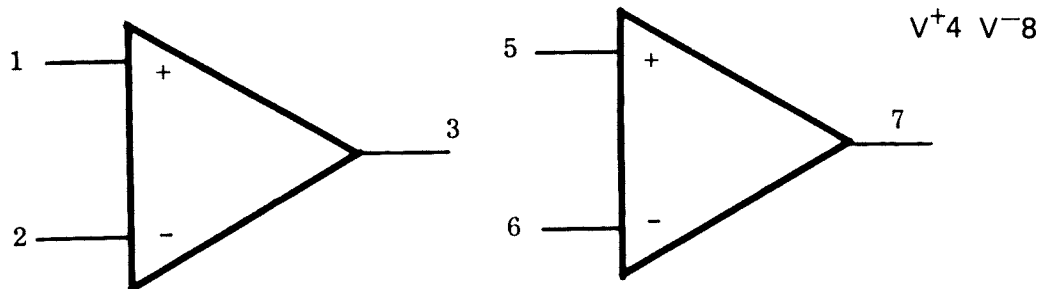
ENABLE	SELECT INPUT	INPUTS		OUTPUT
\bar{E}	S	I_{0X}	I_{1X}	Z_X
H	X	X	X	L
L	H	X	L	L
L	H	X	H	H
L	L	L	X	L
L	L	H	X	H

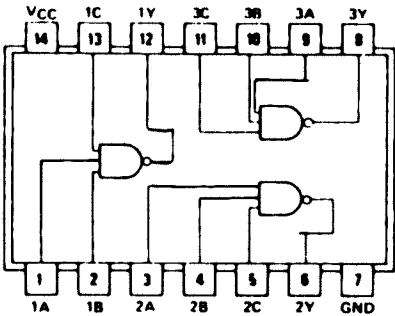
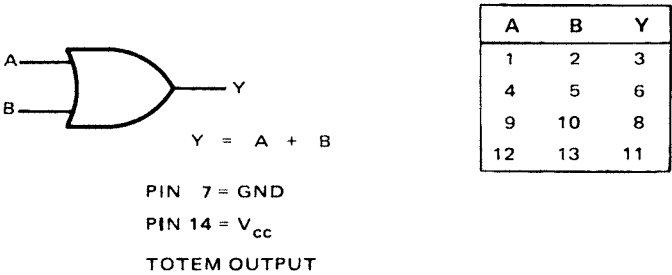
H = HIGH VOLTAGE LEVEL
L = LOW VOLTAGE LEVEL
X = EITHER HIGH OR LOW LOGIC LEVEL

OUTPUT LOGIC EQUATIONS ARE:

$$Z_a = E \cdot (I_{1a} \cdot S + I_{0a} \cdot \bar{S}) \quad Z_b = E \cdot (I_{1b} \cdot S + I_{0b} \cdot \bar{S})$$

$$Z_c = E \cdot (I_{1c} \cdot S + I_{0c} \cdot \bar{S}) \quad Z_d = E \cdot (I_{1d} \cdot S + I_{0d} \cdot \bar{S})$$





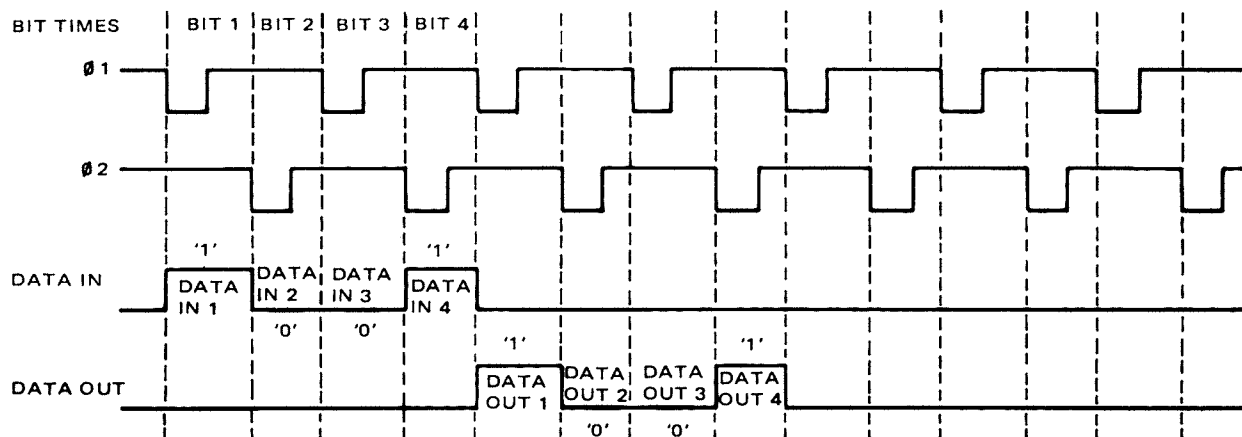
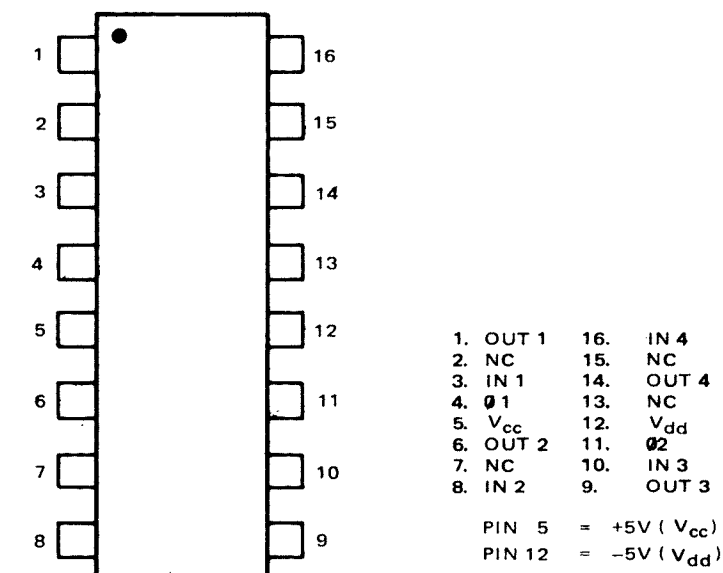
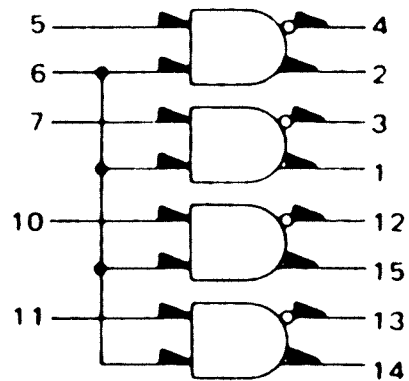


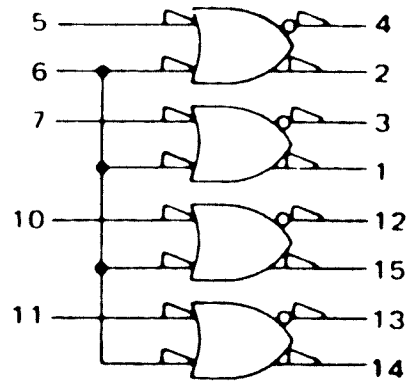
FIGURE 1

FIGURE 1 IS A SIMPLIFIED ILLUSTRATION OF THE TIMING OF A 4-BIT MULTIPLEXED REGISTER SHOWING INPUT OUTPUT RELATIONSHIPS WITH RESPECT TO THE CLOCK. IF DATA ENTERS THE REGISTER AT Ø 1 TIME, IT EXITS AT Ø 1 TIME, (BEGINNING ON Ø 1'S NEGATIVE-GOING EDGE AND ENDING ON THE SUCCEEDING Ø 2'S NEGATIVE-GOING EDGE).

POSITIVE LOGIC



NEGATIVE LOGIC

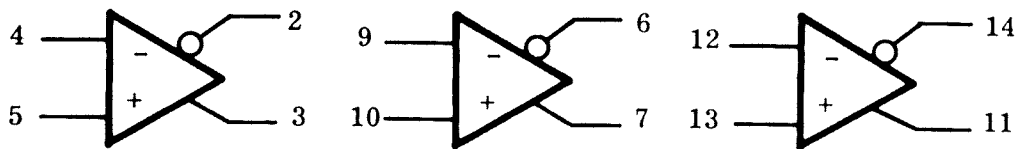


Gnd	Pin 16
V _{CC} (+5.0 Vdc)	Pin 9
V _{EE} (-5.2 Vdc)	Pin 8

MOTOROLA
MC 10116 L
MC 10116 P

AMPEX
587-133
587-704

TRIPLE LINE RECEIVER ECL

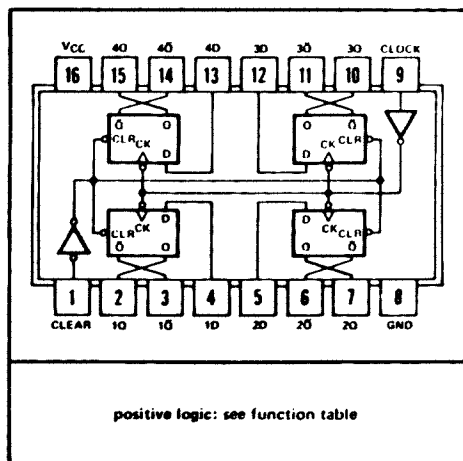


VBB 11 VEE 8
VCC₁ 1 VCC₂ 16

TEXAS INST
SN74S175N

AMPEX
587-152

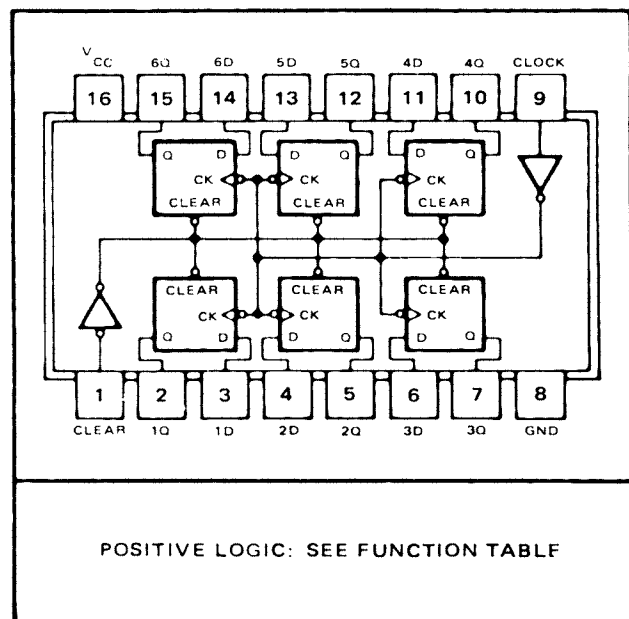
HEX/QUADRUPLE D-TYPE
FLIP-FLOPS WITH CLEAR



FUNCTION TABLE
(EACH FLIP-FLOP)

INPUTS			OUTPUTS	
CLEAR	CLOCK	D	Q	\bar{Q} †
L	X	X	L	H
H	↑	H	H	L
H	↑	L	L	H
H	L	X	Q_0	\bar{Q}_0

H = high level (steady state)
L = low level (steady state)
X = irrelevant
↑ = transition from low to high level
 Q_0 = the level of Q before the indicated steady-state input conditions were established.
† = '175, 'LS175, and 'S175 only



FUNCTION TABLE
(EACH FLIP-FLOP)

INPUTS			OUTPUTS	
CLEAR	CLOCK	D	Q	\bar{Q} †
L	X	X	L	H
H	↑	H	H	L
H	↑	L	L	H
H	L	X	Q_0	\bar{Q}_0

H = high level (steady state)

L = low level (steady state)

X = irrelevant

↑ = transition from low to high level

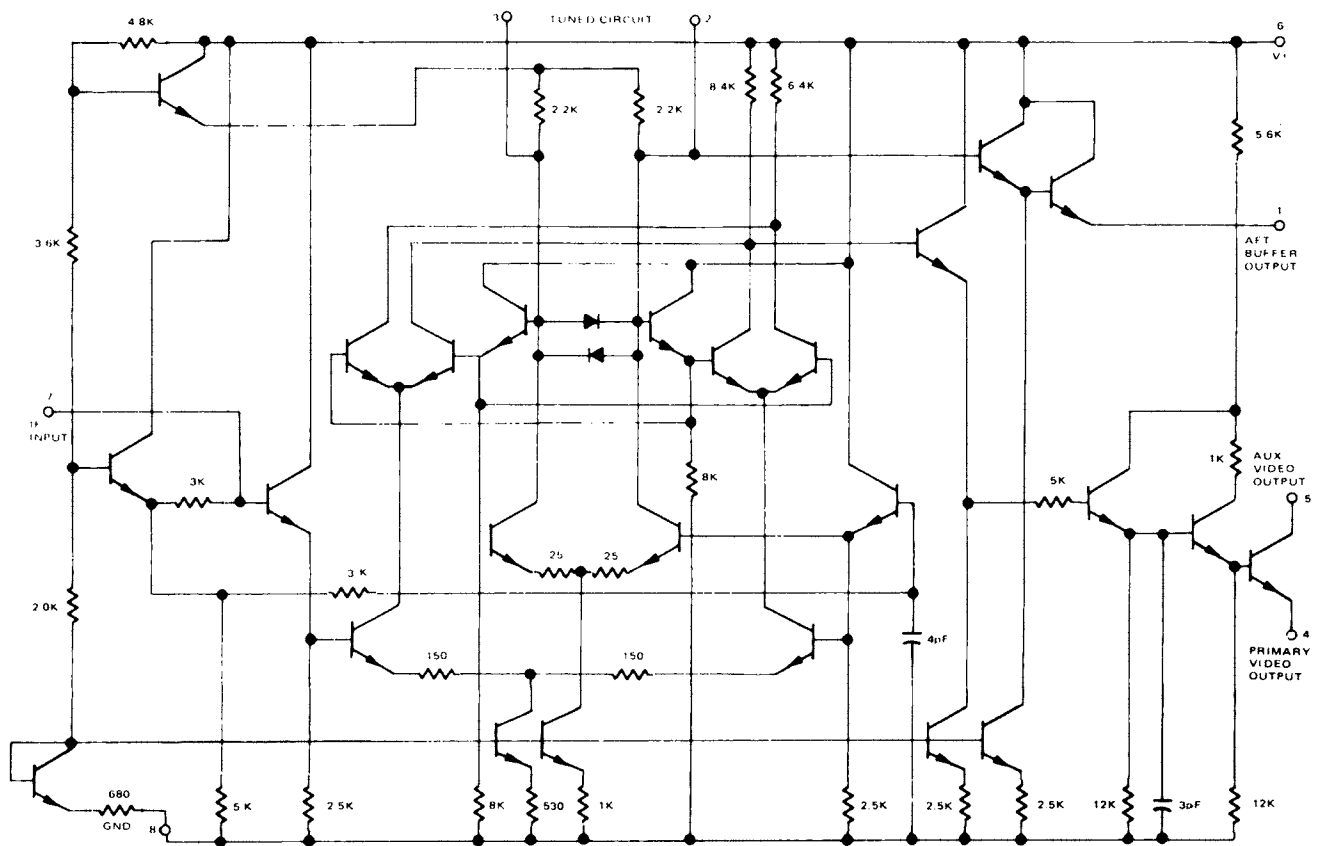
Q_0 = the level of Q before the indicated steady state input conditions were established

† = '175, 'LS175, and 'S175 only

MOTOROLA
MC 1330 P

AMPEX
587-163

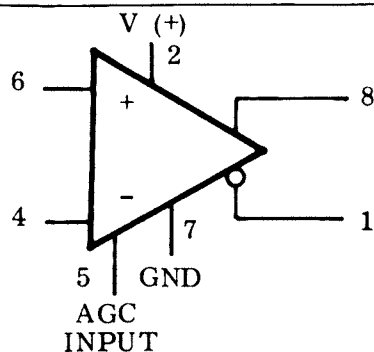
VIDEO
DETECTOR



SN 76600P
(MC 1350P)

587-164

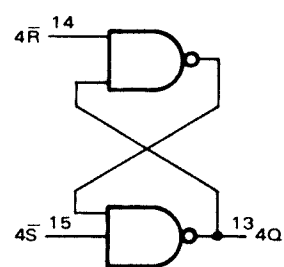
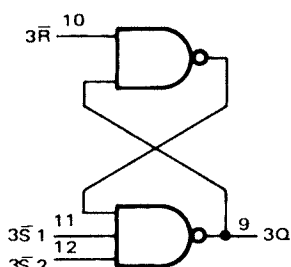
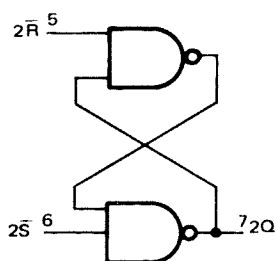
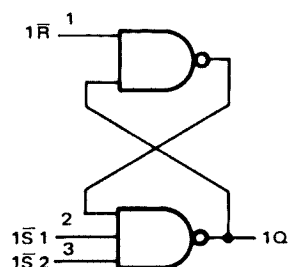
IF AMPLIFIER



TEXAS INSTRUMENTS
SN 74279

AMPEX
587-266

QUAD $\bar{S} \cdot \bar{R}$ LATCHES



FUNCTION TABLE

INPUTS \bar{S} \bar{R}	OUTPUT Q
H H	Q_0
L H	H
H L	L
L L	H^*

H = HIGH

L = LOW LEVEL

Q_0 = THE LEVEL OF Q BEFORE THE INDICATED INPUT CONDITIONS WERE ESTABLISHED.

*THIS OUTPUT LEVEL IS PSEUDO STABLE, THAT IS, IT MAY NOT PERSIST WHEN THE \bar{S} AND \bar{R} INPUTS RETURN TO THEIR INACTIVE (HIGH) LEVEL.

†FOR LATCHES WITH DOUBLE \bar{S} INPUTS:

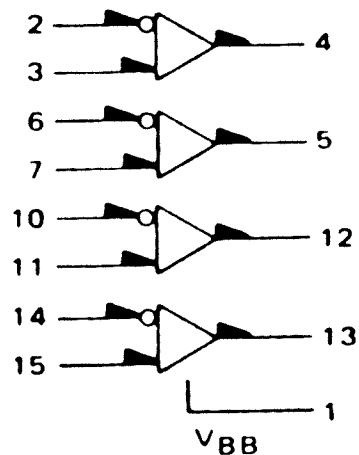
H = BOTH \bar{S} INPUTS HIGH

L = ONE OR BOTH \bar{S} INPUTS LOW

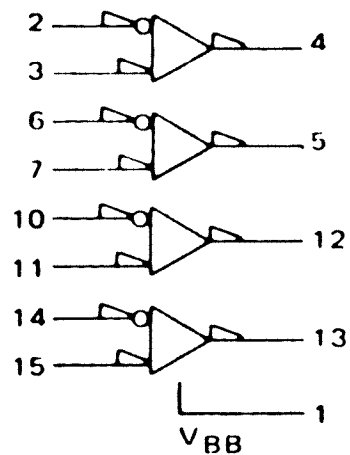
PIN 16 = +5V (V_{CC})

PIN 8 = GND

POSITIVE LOGIC



NEGATIVE LOGIC

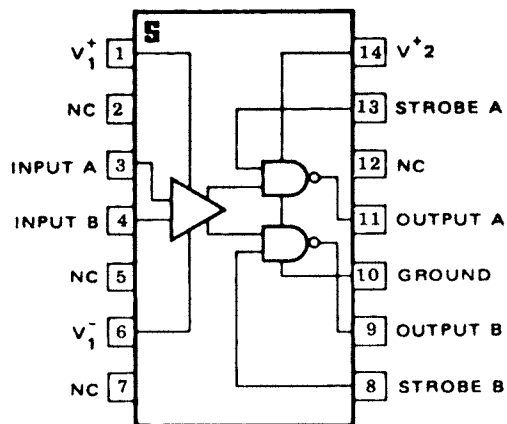


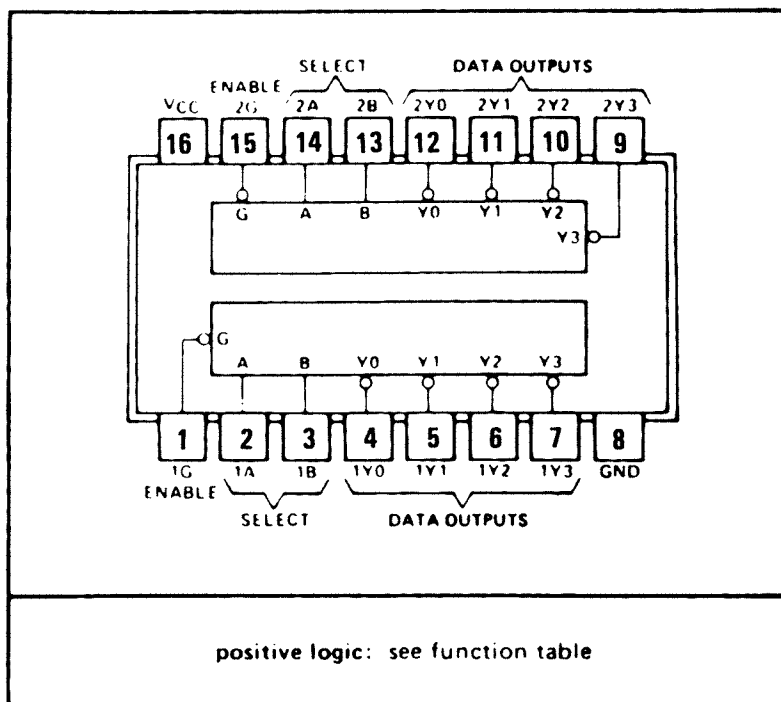
Gnd = Pin 16
V_{CC} (+5.0 Vdc) = Pin 9
V_{EE} (-5.2 Vdc) = Pin 8

SIGNETICS
NE529A
NE529K

AMPEX
589-263
587-287

HIGH SPEED ANALOG VOLTAGE
COMPARATOR DIFFERENTIAL SCHOTTKY
OUTPUT

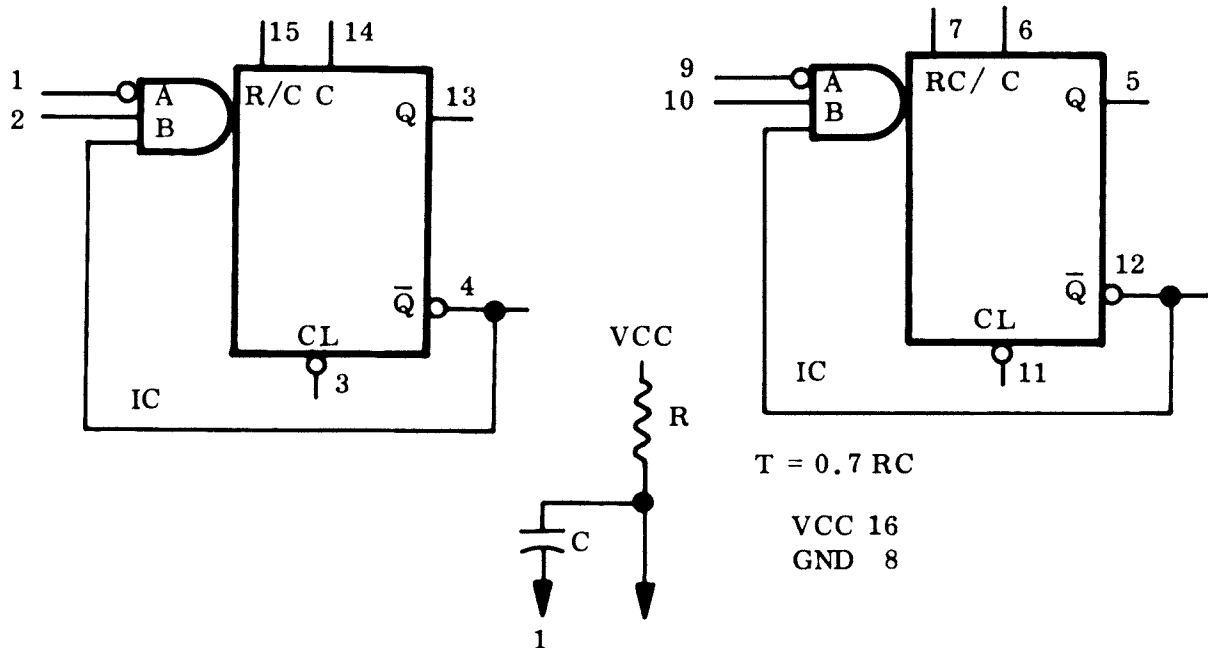


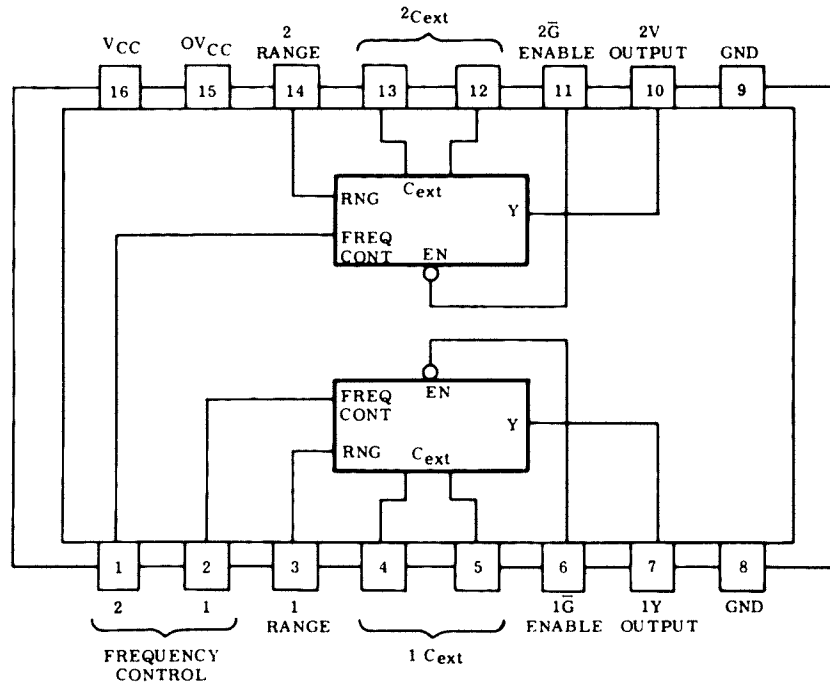


FUNCTION TABLE

INPUTS		OUTPUTS			
ENABLE	SELECT				
G	B A	Y0	Y1	Y2	Y3
H	X X	H	H	H	H
L	L L	L	H	H	H
L	L H	H	L	H	H
L	H L	H	H	L	H
L	H H	H	H	H	L

H = high level, L = low level, X = irrelevant





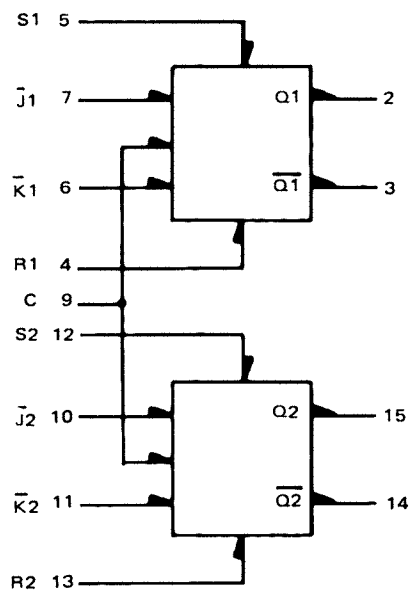
positive logic: While the enable input is low, the output is enabled. While the enable input is high, the output is high.

$$f_o = \frac{500}{C_{ext}}$$

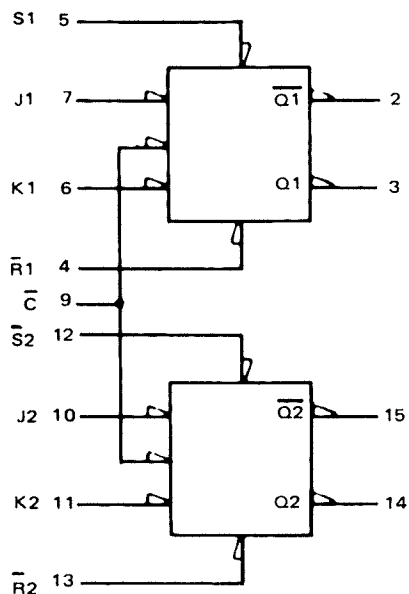
where: f_o = output frequency in megahertz

C_{ext} = external capacitance in picofarads

POSITIVE LOGIC



NEGATIVE LOGIC



R-S TRUTH TABLE

R	S	Q_{n+1}
L	L	Q_n
L	H	H
H	L	L
H	H	N.D.

N.D. = NOT DEFINED

CLOCK J-K TRUTH TABLE *

J	K	Q_{n+1}
L	L	Q_n
H	L	L
L	H	H
H	H	Q_n

*OUTPUT STATES CHANGES ON POSITIVE TRANSITION OF CLOCK FOR J K INPUT CONDITION PRESENT.

V_{CC1} - Pin 1

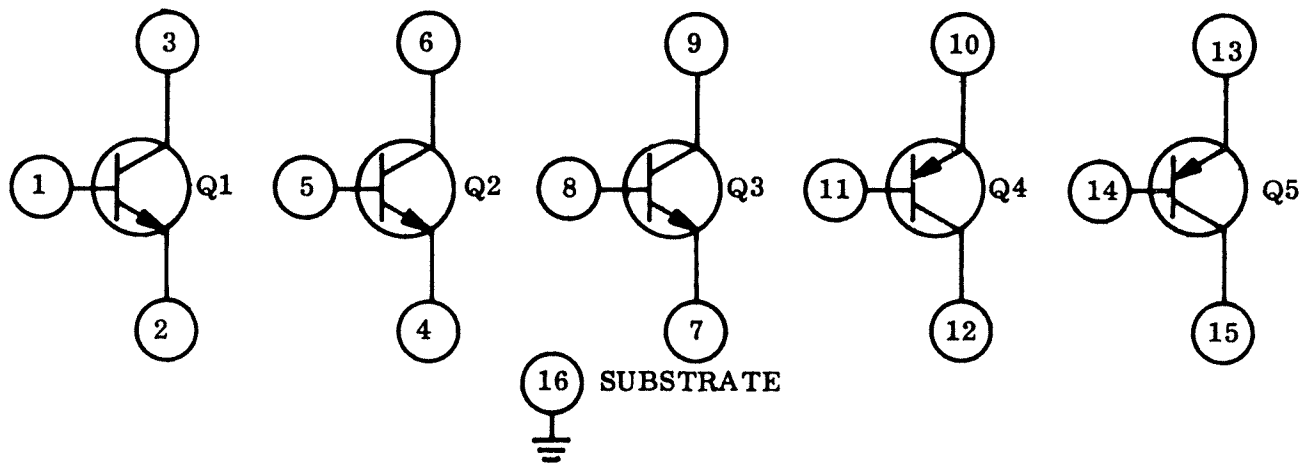
V_{CC2} - Pin 16

V_{EE} - Pin 8

RCA
CA 3096 AE

AMPEX
587-938
587-494

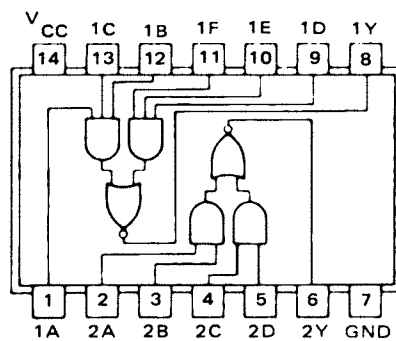
TRANSISTOR ARRAY



TEXAS INSTRUMENTS
SN74LS51N

AMPEX
587-514

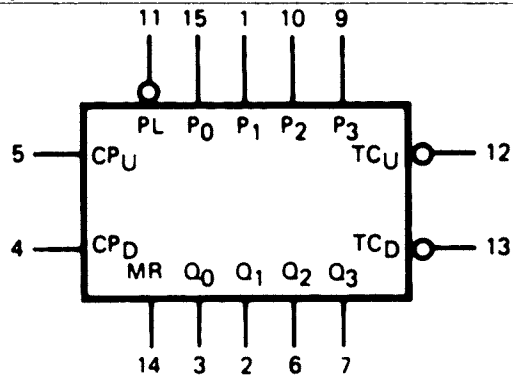
DUAL 2-WIDE 2-INPUT
AND-OR-INVERT GATES



FAIRCHILD/T.I.
74LS193
SN74LS193N

AMPEX
587-536
587-833

PRESETTABLE 4-BIT/BINARY
UP/DOWN COUNTER

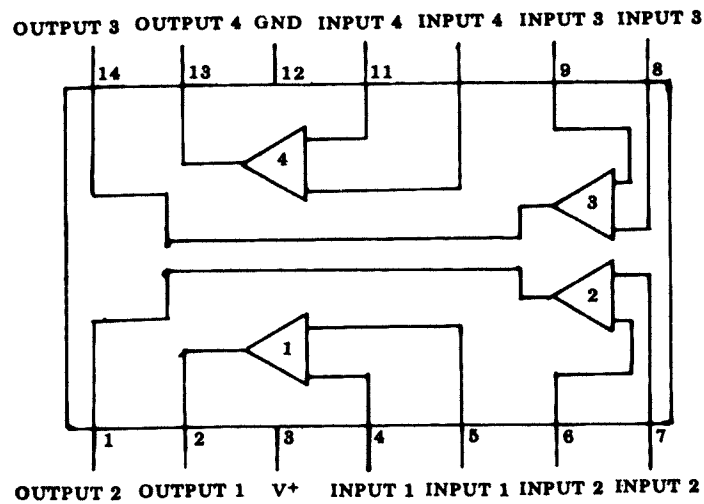


V_{CC} = Pin 16
GND = Pin 8

NATIONAL SEMI
LM339M

AMPEX
587-660

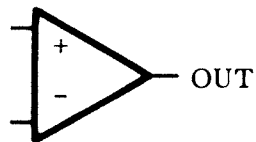
VOLTAGE COMPARATORS



MOTOROLA
MC 3403 P

AMPEX
587-682

QUAD OPERATIONAL AMPLIFIER



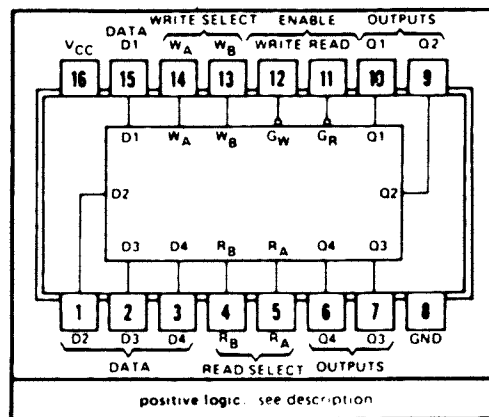
VCC 4
VEE 11

INPUT		OUT
+	-	
3	2	1
5	6	7
10	9	8
12	13	14

TEXAS INST
SN74LS670

AMPEX
587-705

4X4 REGISTER FILES WITH 3-STATE
OUTPUTS



WRITE FUNCTION TABLE (SEE NOTES A, B, AND C)

WRITE INPUTS			WORD			
WB	WA	GW	0	-1	2	3
L	L	L	Q = D	Q ₀	Q ₀	Q ₀
L	H	L	Q ₀	Q = D	Q ₀	Q ₀
H	L	L	Q ₀	Q ₀	Q = D	Q ₀
H	H	L	Q ₀	Q ₀	Q ₀	Q = D
X	X	H	Q ₀	Q ₀	Q ₀	Q ₀

READ FUNCTION TABLE (SEE NOTES A AND D)

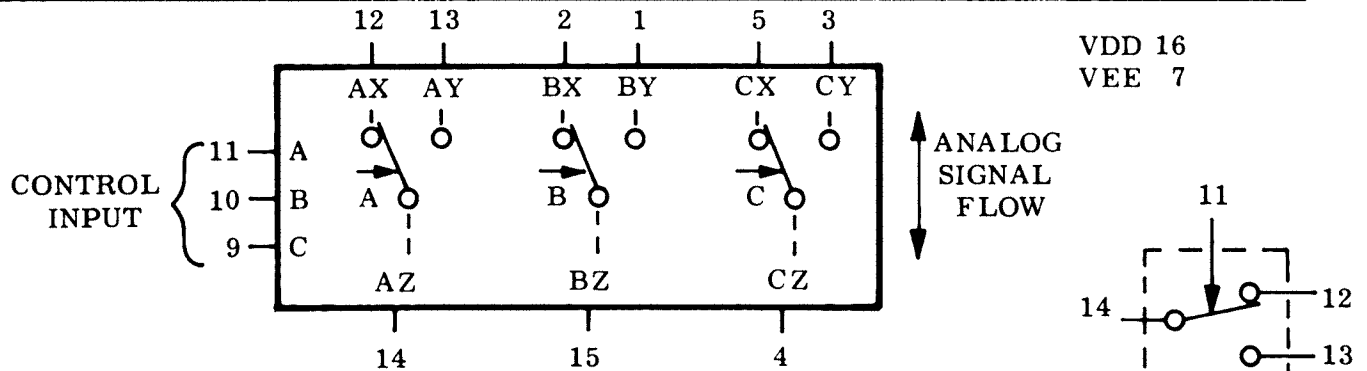
READ INPUTS			OUTPUTS			
RB	RA	GR	Q1	Q2	Q3	Q4
L	L	L	W0B1	W0B2	W0B3	W0B4
L	H	L	W1B1	W1B2	W1B3	W1B4
H	L	L	W2B1	W2B2	W2B3	W2B4
H	H	L	W3B1	W3B2	W3B3	W3B4
X	X	H	Z	Z	Z	Z

- NOTES
- A. H = high level, L = low level, X = irrelevant, Z = high impedance (off)
 - B. (Q = D) - The four selected internal flip flop outputs will assume the states applied to the four external data inputs
 - C. Q₀ - the level of Q before the indicated input conditions were established
 - D. W0B1 - The first bit of word 0, etc

RCA
CD 4053AE

AMPEX
587-723

TRIPLE 2 CHANNEL ANALOG
MULTIPLEXER C-MOS



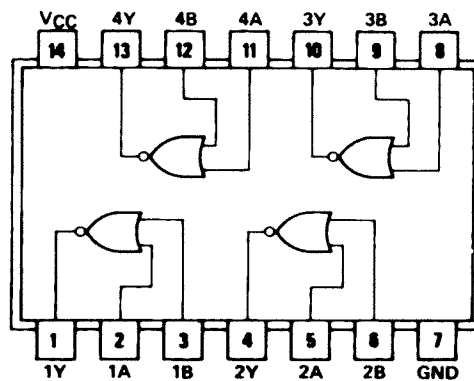
HIGH ON A, B, OR C CONTROL UNIT CONNECTS
A, B, OR C_Y TO A, B, OR C_Z BILATERALLY.

LOW ON CONTROL INPUTS CONNECT AX - AZ, BX - BZ, CX - CZ
BILATERALLY.

FAIRCHILD
74LS02

AMPEX
587-750

QUADRUPLE 2-INPUT POSITIVE-NOR
GATE

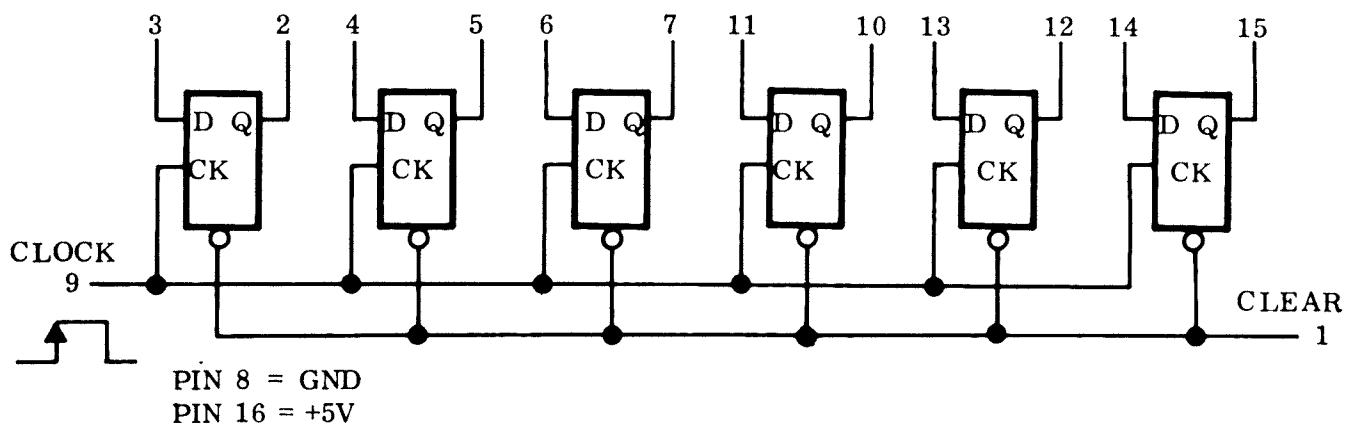


$$Y = \overline{A+B}$$

T.I./NATL
SN74LS174N
MM 74C174
SN 74174

AMPEX
587-770
587-687
586-924

HEX D TYPE FLIP-FLOP WITH COMMON CLOCK
AND COMMON CLEAR

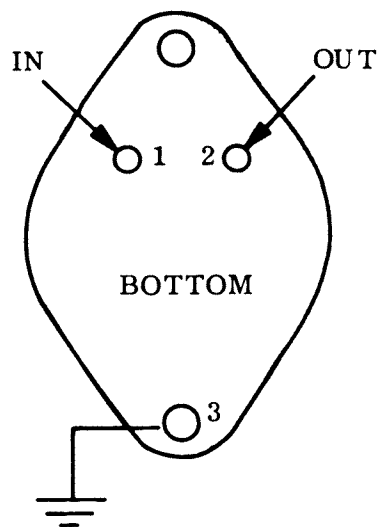
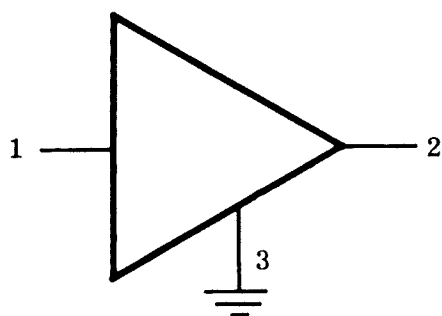


DATA IS CLOCKED INTO FLIP-FLOP ON POSITIVE TRANSITION. LOW OF THE CLEAR SETS AND HOLDS ALL OUTPUTS LOW.

FAIRCHILD
78L05AWC
7805VC

AMPEX
587-771
587-438

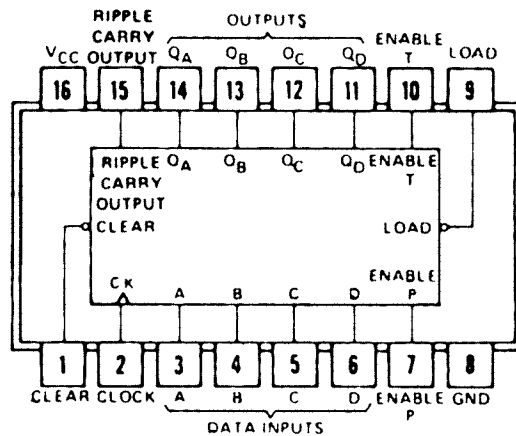
VOLT REG. 5V



TEXAS INSTR
SN74LS161

AMPEX
587-772

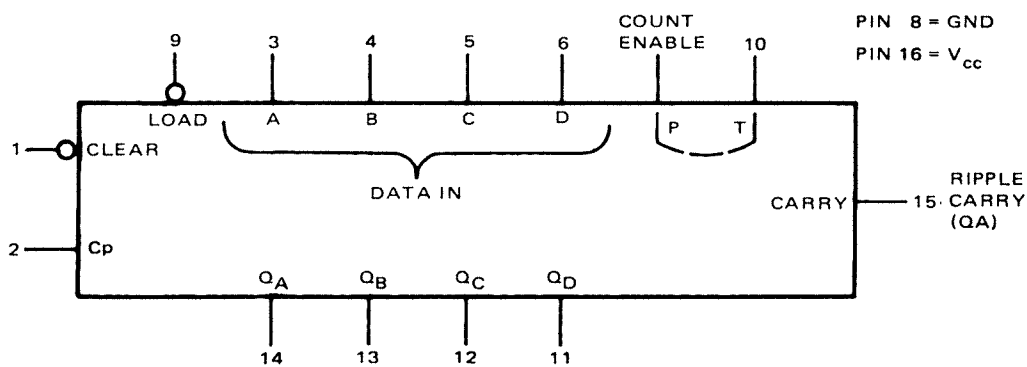
SYNCHRONOUS 4-BIT COUNTERS



TEXAS INSTRUMENTS
SN 74163
SN 74LS163N

AMPEX
586-923
587-773

SYNCHRONOUS BINARY COUNTER

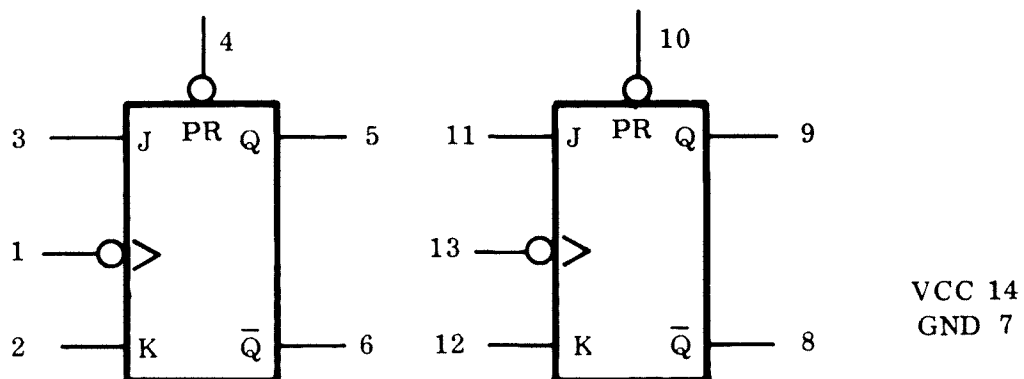


CLEAR AND LOAD SYNCHRONOUS WITH POSITIVE TRANSITION OF CLOCK PULSE.

TEXAS INSTR
SN 74LS113 N

AMPEX
587-776

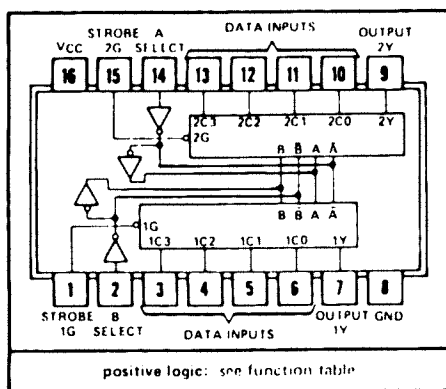
DUAL J-K FLIP FLOP



TEXAS INST
SN74LS153N

AMPEX
587-777

DUAL 4-LINE-TO-1-LINE DATA
SELECTORS/MULTIPLEXERS



FUNCTION TABLE

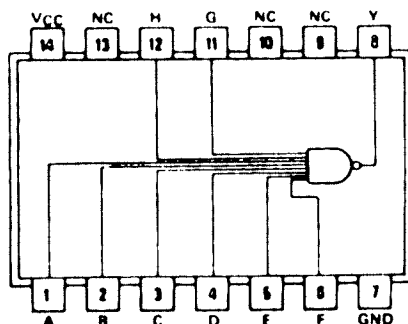
SELECT INPUTS		DATA INPUTS				STROBE	OUTPUT
B	A	C0	C1	C2	C3	G	Y
X	X	X	X	X	X	H	L
L	L	L	X	X	X	L	L
L	L	H	X	X	X	L	H
L	H	X	L	X	X	L	L
L	H	X	H	X	X	L	H
H	L	X	X	L	X	L	L
H	L	X	X	H	X	L	H
H	H	X	X	X	L	L	L
H	H	X	X	X	H	L	H

Select inputs A and B are common to both sections.
H = high level, L = low level, X = irrelevant

TEXAS INST
SN74LS30N

AMPEX
587-778

8-INPUT POSITIVE-NAND GATES

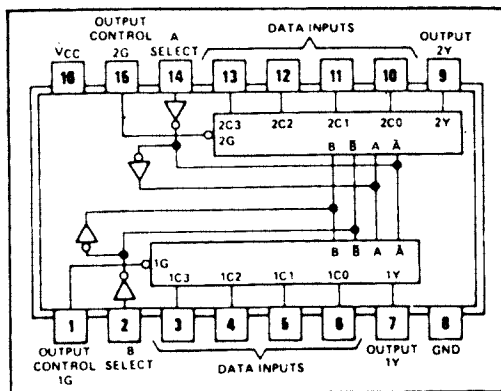


positive logic:
 $Y = ABCDEFGH$

TEXAS INSTR
SN74LS253

AMPEX
587-797

DUAL 4-LINE-TO-1-LINE DATA SELECTORS/
MULTIPLEXERS WITH 3 STATE OUTPUTS



FUNCTION TABLE

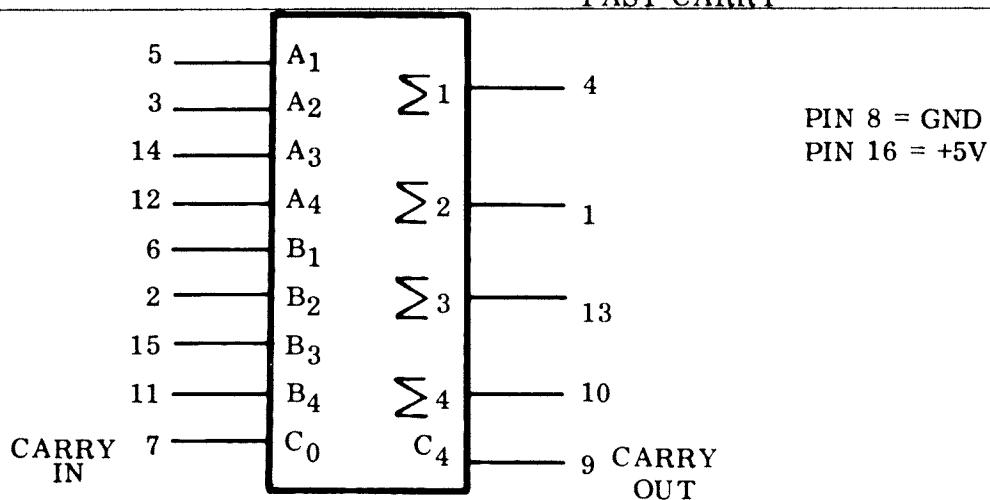
SELECT INPUTS		DATA INPUTS				OUTPUT CONTROL	OUTPUT
B	A	C0	C1	C2	C3	G	Y
X	X	X	X	X	X	H	Z
L	L	L	X	X	X	L	L
L	L	H	X	X	X	L	H
L	H	X	L	X	X	L	L
L	H	X	H	X	X	L	H
H	L	X	X	L	X	L	L
H	L	X	X	H	X	L	H
H	H	X	X	X	L	L	L
H	H	X	X	X	H	L	H

Address inputs A and B are common to both sections.
H = high level, L = low level, X = irrelevant, Z = high impedance (off)

TEXAS INST
SN 74LS283N
SN 74283

AMPEX
587-814
587-495

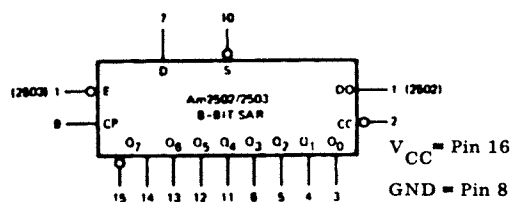
4 BIT BINARY ADDER WITH
FAST CARRY



ADVANCED MICRO DEVICES
AM2502PC

AMPEX
587-894

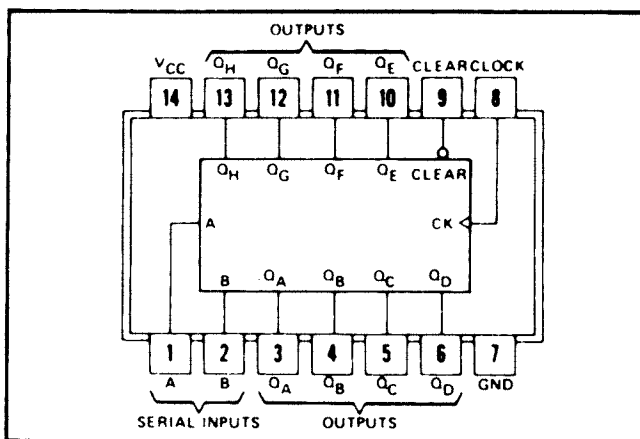
EIGHT-BIT/TWELVE-BIT SUCCESSIVE
APPROXIMATION REGISTERS



FAIRCHILD
74LS164

AMPEX
587-895

8-BIT PARALLEL-OUT SERIAL SHIFT REGISTER



FUNCTION TABLE

INPUTS				OUTPUTS			
CLEAR	CLOCK	A	B	QA	QB	...	QH
L	X	X	X	L	L	...	L
H	L	X	X	QA0	QB0	...	QH0
H	↑	H	H	H	QAn	...	QGn
H	↑	L	X	L	QAn	...	QGn
H	↑	X	L	L	QAn	...	QGn

H = high level (steady state), L = low level (steady state)

X = irrelevant (any input, including transitions)

↑ = transition from low to high level.

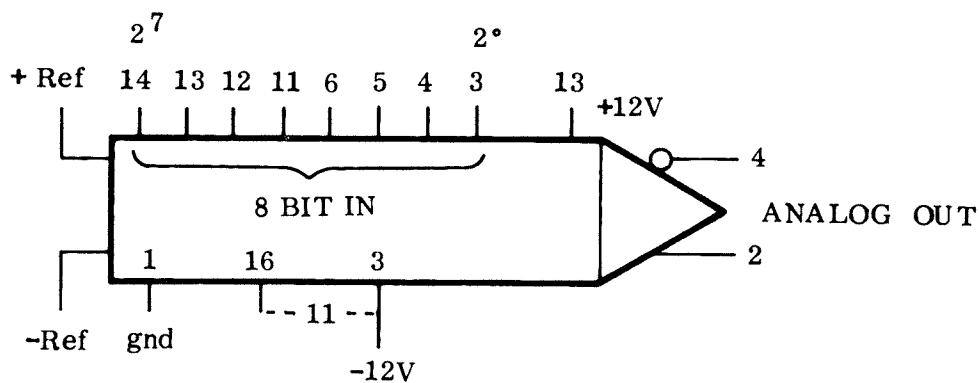
QA0, QB0, QH0 = the level of QA, QB, or QH, respectively, before the indicated steady-state input conditions were established.

QAn, QGn = the level of QA or QG before the most-recent ↑ transition of the clock; indicates a one-bit shift.

PRECISION MONOLITHIC
DAC 08CZ

AMPEX
587-896

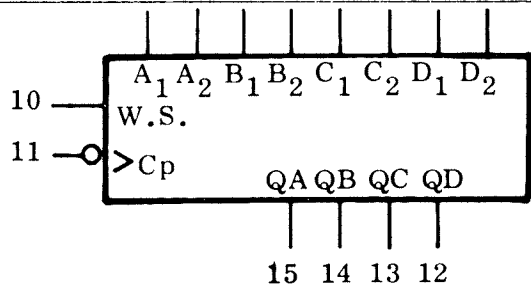
8 BIT D-A CONVERTER



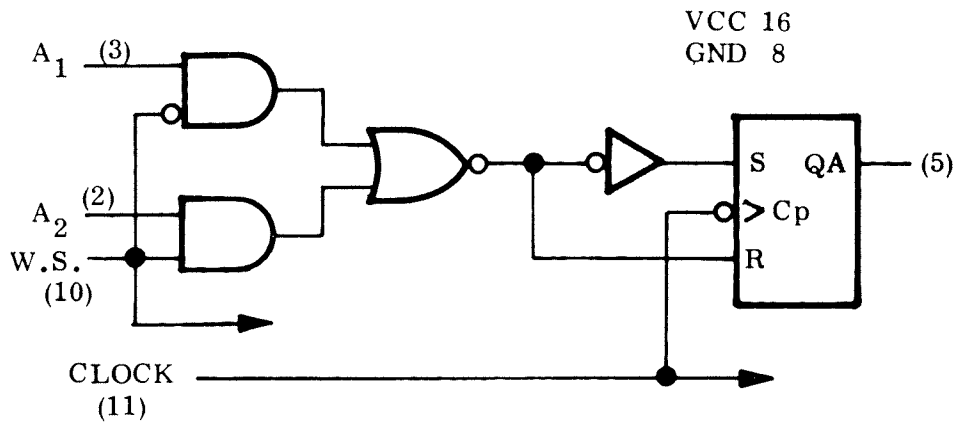
TEXAS INST
SN 74LS298N

AMPEX
587-901

QUAD TWO INPUT MULTIPLEXER
WITH STORAGE



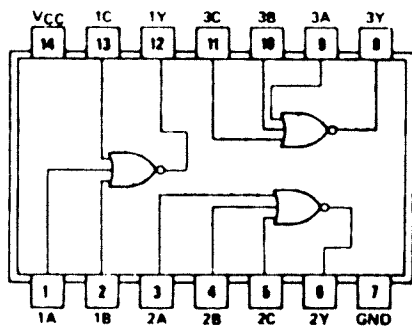
W.S	Cp	QA	QB	QC	QD
L	↓	A ₁	B ₁	C ₁	D ₁
H	↓	A ₂	B ₂	C ₂	D ₂
X	H	QA	QB	QC	QD



TEXAS INST
SN74LS27N

AMPEX
587-952

TRIPLE 3-INPUT POSITIVE-NOR GATES

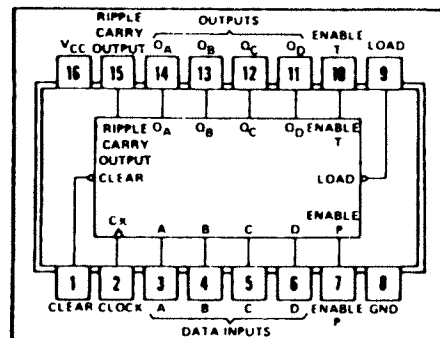


positive logic:
 $Y = A+B+C$

TEXAS INST
SN74S163N

AMPEX
589-007

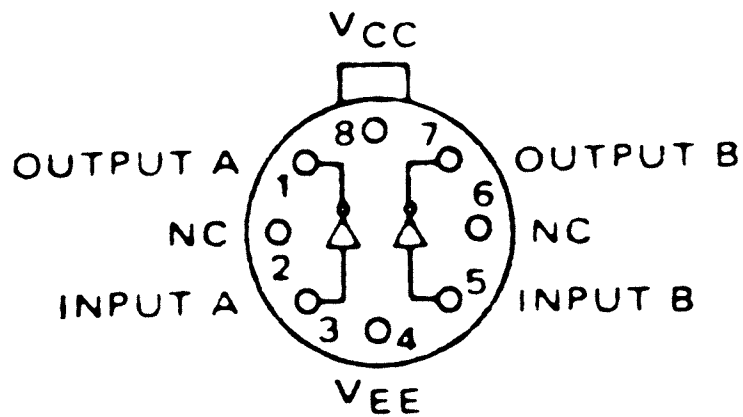
SYNCHRONOUS 4-BIT COUNTERS

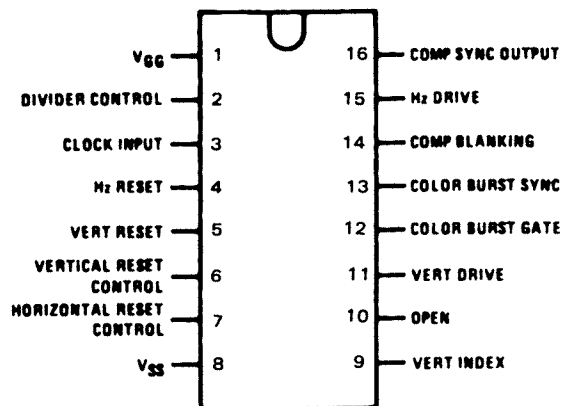
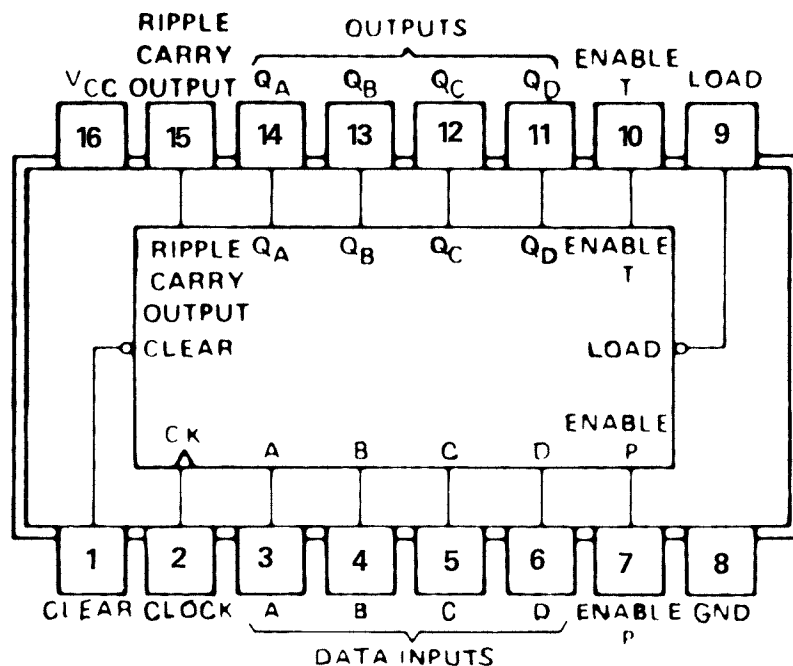


MOTOROLA
MMH0026GH

AMPEX
589-011

CLOCK DRIVER

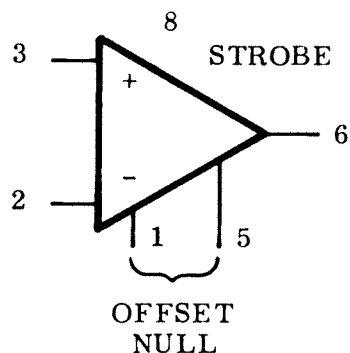




RCA
CA 3140 T

AMPEX
589-180

OP AMP (MOS FET INPUT)

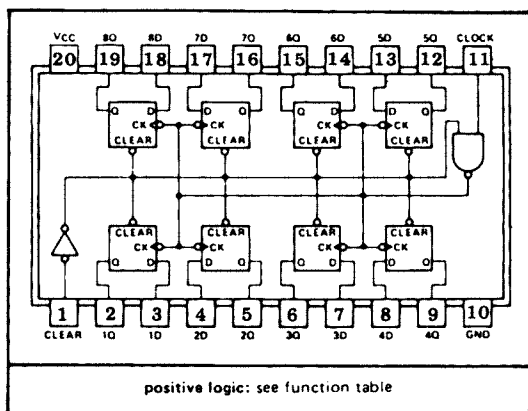


V⁺7 V⁻4

TEXAS INST
SN74LS273N

AMPEX
589-331

OCTAL D-TYPE FLIP-FLOP WITH CLEAR



FUNCTION TABLE
(EACH FLIP-FLOP)

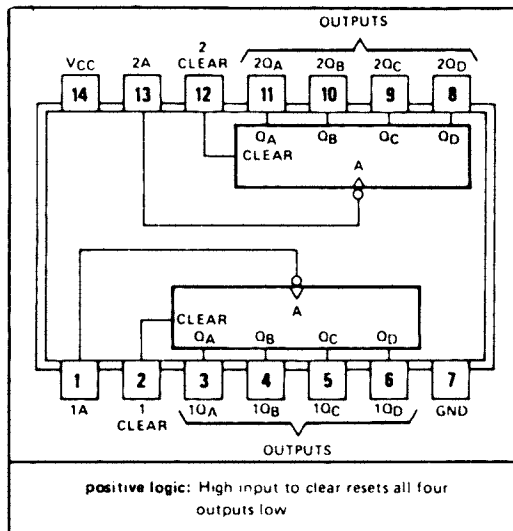
INPUTS			OUTPUT
CLEAR	CLOCK	D	Q
L	X	X	L
H	↑	H	H
H	↑	L	L
H	L	X	Q ₀

H = high level (steady state)
L = low level (steady state)
X = irrelevant
↑ = transition from low to high level
Q₀ = the level of Q before the indicated steady state input conditions were established.

TEXAS INST
SN74LS393N

AMPEX
589-334

DUAL 4-BIT DECADE AND BINARY
COUNTERS

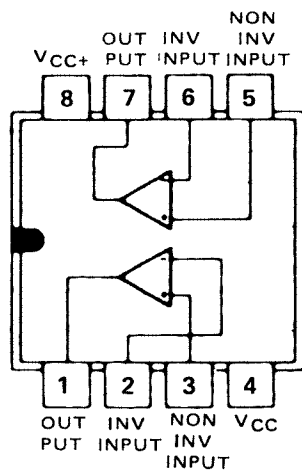


COUNT	OUTPUT			
	Q _D	Q _C	Q _B	Q _A
0	L	L	L	L
1	L	L	L	H
2	L	L	H	L
3	L	L	H	H
4	L	H	L	L
5	L	H	L	H
6	L	H	H	L
7	L	H	H	H
8	H	L	L	L
9	H	L	L	H
10	H	L	H	L
11	H	L	H	H
12	H	H	L	L
13	H	H	L	H
14	H	H	H	L
15	H	H	H	H

TEXAS INST
TL082CP

AMPEX
589-427

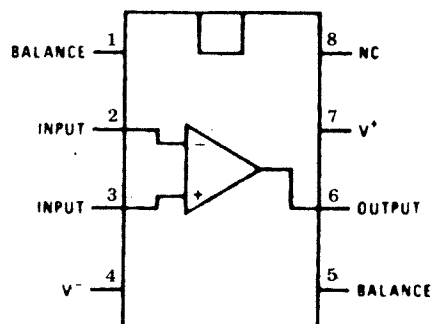
JFET-INPUT OPERATIONAL
AMPLIFIER



NATIONAL SEMI
LF356N

AMPEX
589-441

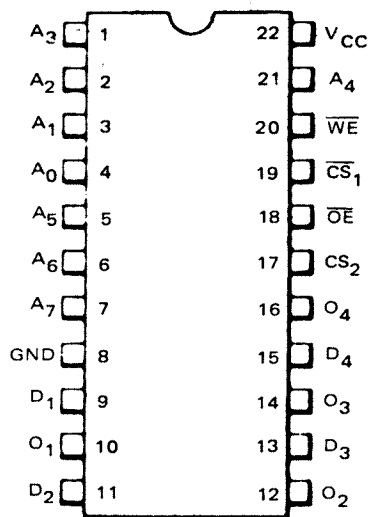
OPERATIONAL AMPLIFIER/BUFFER



FAIRCHILD
93L422

AMPEX
589-482

256 X 4-BIT FULLY DECODED
RANDOM ACCESS MEMORY



PIN NAMES

$A_0 - A_7$

Address Inputs

$D_1 - D_4$

Data Inputs

\overline{CS}_1, CS_2

Chip Select Inputs

\overline{WE}

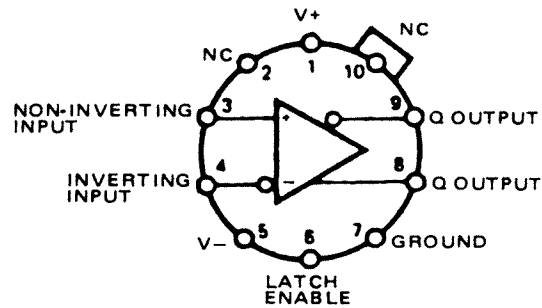
Write Enable Input

$O_1 - O_4$

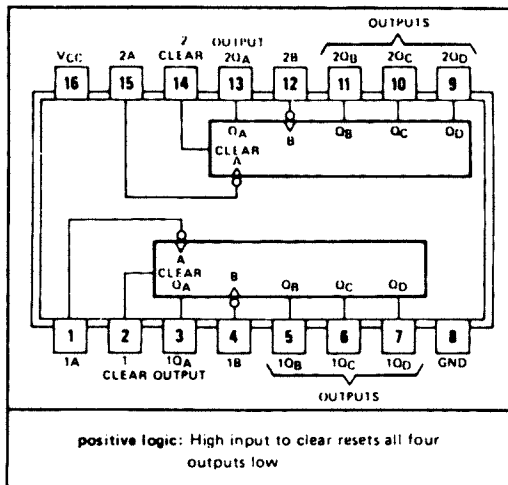
Data Outputs

\overline{OE}

Output Enable



NOTE: ON METAL PACKAGE, PIN 5 IS CONNECTED TO CASE.



BCD COUNT SEQUENCE
(EACH COUNTER)
(See Note A)

COUNT	OUTPUT			
	Q _D	Q _C	Q _B	Q _A
0	L	L	L	L
1	L	L	L	H
2	L	L	H	L
3	L	L	H	H
4	L	H	L	L
5	L	H	L	H
6	L	H	H	L
7	L	H	H	H
8	H	L	L	L
9	H	L	L	H

BI-QUINARY (5-2)
(EACH COUNTER)
(See Note B)

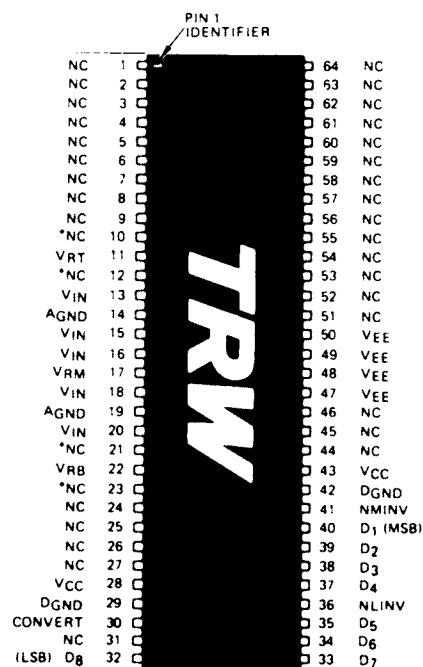
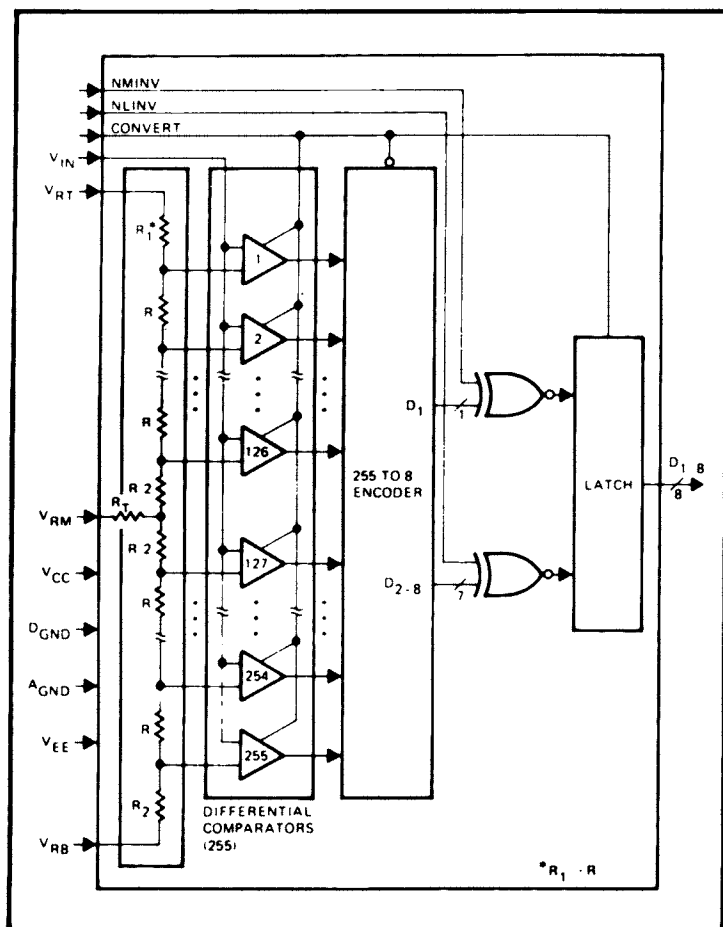
COUNT	OUTPUT			
	Q _A	Q _D	Q _C	Q _B
0	L	L	L	L
1	L	L	L	H
2	L	L	H	L
3	L	L	H	H
4	L	H	L	L
5	H	L	L	L
6	H	L	L	H
7	H	L	H	L
8	H	L	H	H
9	H	H	L	L

NOTES: A. Output Q_A is connected to input B for BCD count.
B. Output Q_D is connected to input A for bi-quinary count.
C. H = high level, L = low level.

TRW
TDS5233

AMPEX
589-685

MONOLITHIC VIDEO A/D CONVERTER
8 BIT, 30 MSPS

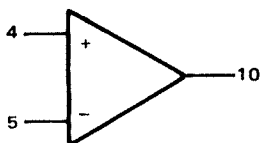


*RECOMMENDED CONNECTION TO ANALOG GROUND
FOR INTERELECTRODE SHIELDING

FAIRCHILD
FC 741 PC

AMPEX
590-533

OPERATIONAL
AMPLIFIER



1,2,7,8
12,13,14 NO CONNECTION

PIN 6 = - SUPPLY
PIN 11 = + SUPPLY

AMPEX